COMPACTION TEST REPORT

Curve No.: 101

Project No.: 03-100 **Date:** 4/2/03

Project: Unical Edmonds

Location:

Elev./Depth: **Sample No.** 1

Remarks: tested/calculated by m.holtz
reviewed by a. hale

MATERIAL DESCRIPTION

Description: import drk med sand w/ 1 1/2" agg

Classifications - **USCS:** **AASHTO:**

Nat. Moist. =

Liquid Limit =

% > No.4 = 11.8 %

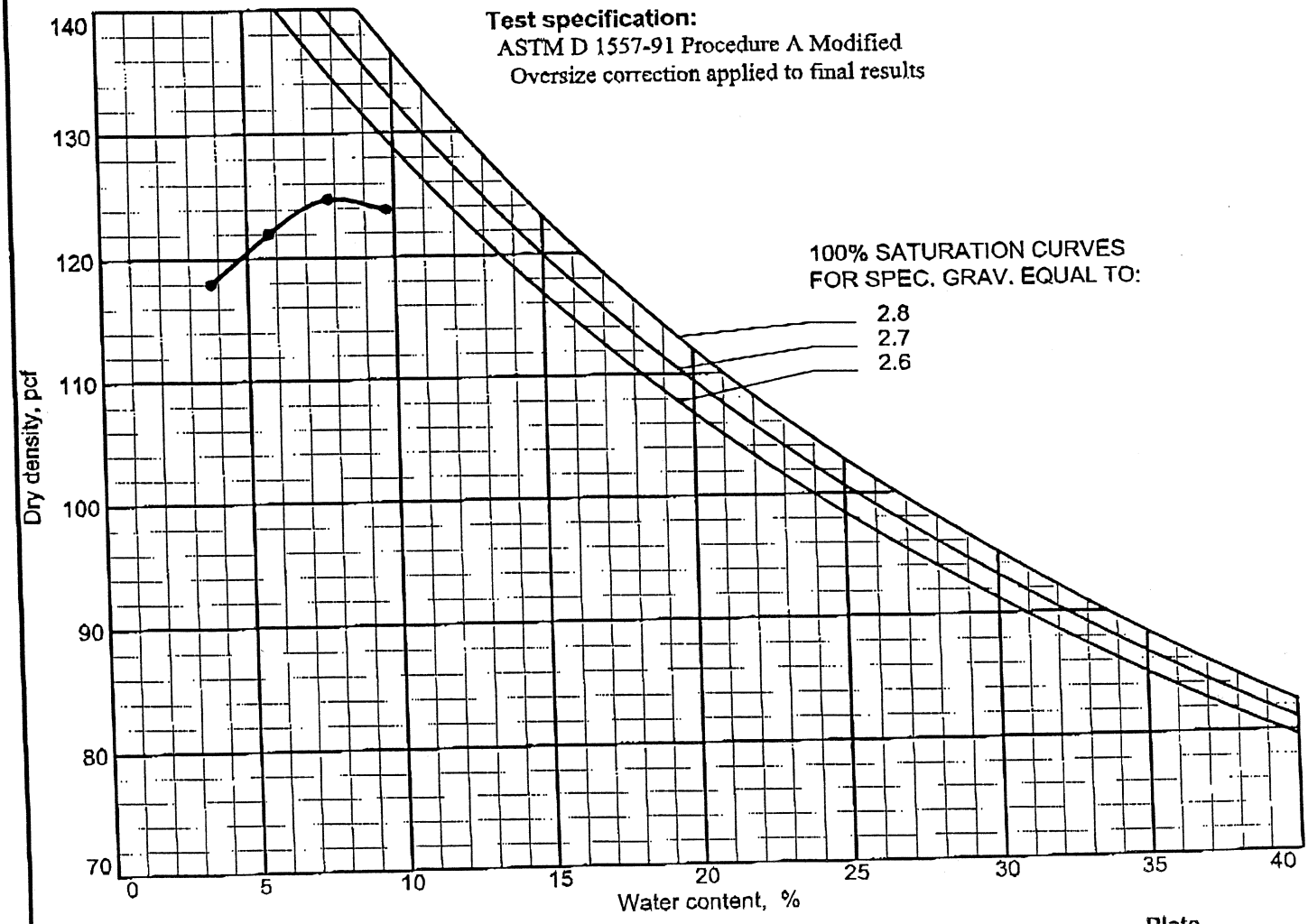
Sp.G. = 2.64

Plasticity Index =

% < No.200 = 0.0 %

TEST RESULTS
Maximum dry density = 128.4 pcf
Optimum moisture = 7.1 %

Test specification:
ASTM D 1557-91 Procedure A Modified
Oversize correction applied to final results



Plate

A.A.R. Testing Laboratory, Inc.

Fireproofing
Aggregates
Shotcrete
Concrete
Masonry
Asphalt
Roofing
Piling
Steel
Soils
Wood

A.A.R. TESTING
LABORATORY, INC.
CONSTRUCTION INSPECTION AND MATERIAL TESTING
NATIONALLY ACCEPTED LABORATORY

May 30th 2003

Wyser Construction
1720 100th Place SE, Suite 101
Everett, WA 98208

Attn: Randy

Project: Edmonds Unocal
Subject: On Site Nuclear Density Testing

This is to advise you that A.A.R. Testing Laboratory was on site at the Edmonds Unocal for periodic nuclear density testing per the request of Wyser Construction. Modified proctors were ran for different materials tested including clay materials, which ended up not being used for back fill. Please refer to the table on page 2 for proctor information. The majority of material tested was sand, supplied by Rinker Materials. All noted nuclear density test locations were found to be in conformance with a 90% compaction requirement and 95% compaction requirement for final lifts. Please reference the reports from the following table.

Date	Report #
1/7/03	4954
1/8/03	4955
1/9/03	4842
1/10/03	3005
1/13/03	4844
2/7/03	4935
2/10/03	4218
2/12/03	4989
2/17/03	4936
2/21/03	3027
2/24/03	4959, 4961, 4960, 3037
2/25/03	3032
2/27/03	4970, 3034, 3035,5000
2/28/03	4963, 4962, 3039
3/5/03	3097, 3096
3/31/03	3087
4/1/03	4185, 3003
4/2/03	3089
4/8/03	3118
4/9/03	3072

Date	Test Number
4/10/03	3095
4/11/03	3117, 3116
4/14/03	3119
4/15/03	3111, 3121, 3122, 3110
4/18/03	3192, 3195, 3194
4/21/03	3188, 3186, 3187
4/22/03	3136, 3123, 3120
4/23/03	3177, 3189
4/25/03	3198
4/28/03	3137
5/2/03	3138, 3139
5/5/03	3212
5/7/03	3202
5/12/03	3216, 3217
5/15/03	3201, 3200
5/21/03	3126, 3125 , 3124

Material	Test Values	Lab #
Sand with minimal aggregate	112.4 @ 7.6%	011
Brown Clay soil mix	127.0 @ 10.4%	012
Fine Sand	105.2 @ 6.0%	018
Dark medium sand w/ 1 ½" aggregate	128.4 @ 7.1%	101
Fine silty sand w/minimal aggregate	116.8 @ 6.5%	104
Brown Clay	114.4 @ 17.0%	135
Dark grayish Clay	111.7 @ 17.8%	136

A.A.R. Testing Laboratory, Inc.

Jerry Andersen
Technical Director

A.A.R. TESTING LABORATORY, INC.

Field Density Report - Nuclear Method

Report Number 3217

A-A-R Testing Laboratory, Inc. 2126 180th Ave. N.E. Park 180 Suite C101, Redmond, WA 98052 Phone 425-881-5812 Fax 425-881-5441

Client:	Wyser Construction	**Project Number**	**03-100**
Contact:		**Project Name:**	Edmonds Unocal
Address:	17125 Sunset Road	**Address:**	Pine Street
	Bothell, WA 98012	**Permit Number:**	NA
Date:	5/12/03	**Time:**	10:30:00 AM

Material Data

Material Description: Sand with minimal agg
Layer Thickness: Unknown
Source: Rinker
Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 21240
Test Methods: Soil ASTM D2922, ASTM D3017
☑ DirectTransmission ☐ Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

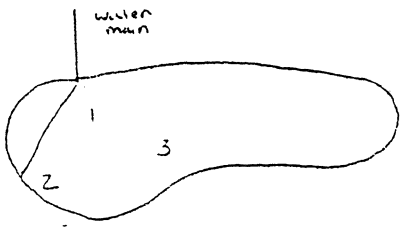
Standard Count

Density Count: 2236 Moisture Count: 650

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	Top of water main See sketch	118.9	9.7	108.4	112.4	96%
2		117.5	8.6	108.2	112.4	96%
3		118.8	9.2	108.8	112.4	97%

Compaction Requirements: 95 % ☑ Conformance ☐ Non Conformance

Remarks/Specifications
Final Lift. Drawing not to scale.



☑ Distribute Client ☐ Distribute Other 1
☐ Distribute Engineer ☐ Distribute Other 2
☐ Distribute Municipality ☐ Distribute Other 3
☐ Distribute Contractor
☐ Distribute Architect

Reviewed By: Hale, Alan
Tested By: Norgar, Jason NO

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3216

A A R Testing Laboratory, Inc. 7126 180th Ave. N.E., Park 180, Suite C101, Redmond, WA 98052 Phone 425.881.5812 Fax 425.881.5441

Client:	Wyser Construction	**Project Number**	**03-100**
Contact:		**Project Name:**	Edmonds Unocal
Address:	17125 Sunset Road	**Address:**	Pine Street
	Bothell, WA 98012	**Permit Number:**	NA
Date:	5/12/03	**Time:**	7:35:00 AM

Material Data

Material Description: Sand with minimal agg
Layer Thickness: Unknown
Source: Rinker
Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 21240
Test Methods: Soil ASTM D2922, ASTM D3017
☑ DirectTransmission ☐ Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

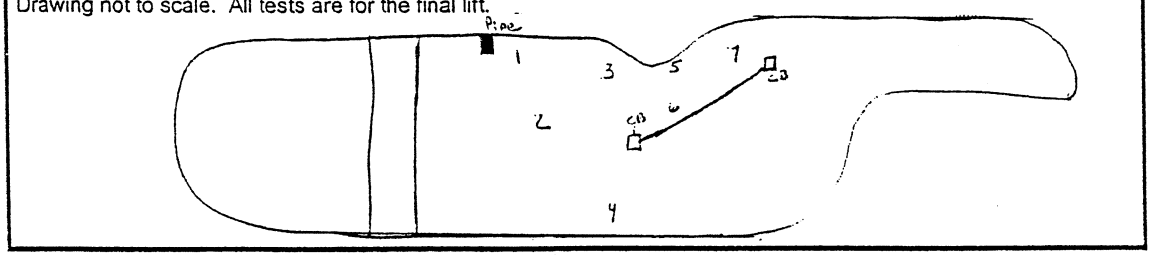
Density Count: 2236 Moisture Count: 650

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	North half of pit #2604 Final grade See sketch	114.6	6.9	107.2	112.4	95%
2		115.4	8	106.9	112.4	95%
3		116.6	7.5	108.5	112.4	97%
4		116	8	107.4	112.4	96%
5	South half of pit 2604 top of CB See sketch	114.5	6.8	107.2	112.4	95%

Compaction Requirements: 95 % ☑ Conformance ☐ Non Conformance

Remarks/Specifications

Drawing not to scale. All tests are for the final lift.



☑ Distribute Client ☐ Distribute Other 1
☐ Distribute Engineer ☐ Distribute Other 2
☐ Distribute Municipality ☐ Distribute Other 3
☐ Distribute Contractor
☐ Distribute Architect

Reviewed By: Hale, Alan
Tested By: Norgar, Jason NO

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3216

A.A.R Testing Laboratory, Inc. 7126 180th Ave. N.E. Park 180, Suite C101, Redmond, WA. 98052 Phone 425.881.5812 Fax 425.881.5441

Client:	Wyser Construction	**Project Number**	03-100
Contact:		**Project Name:**	Edmonds Unocal
Address:	17125 Sunset Road	**Address:**	Pine Street
	Bothell, WA 98012	**Permit Number:**	NA
Date:	5/12/03	**Time:**	7:35:00 AM

Material Data

Material Description: Sand with minimal agg
Layer Thickness: Unknown
Source: Rinker
Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 21240
Test Methods: Soil ASTM D2922, ASTM D3017
☑ DirectTransmission ☐ Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

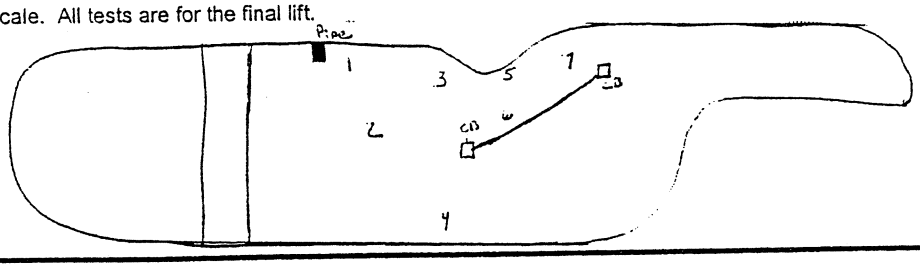
Density Count: 2236 Moisture Count: 650

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
6	↓	115.6	7.2	107.8	112.4	96%
7		111.7	4.9	106.5	112.4	95%

Compaction Requirements: 95 % ☑ Conformance ☐ Non Conformance

Remarks/Specifications

Drawing not to scale. All tests are for the final lift.



☑ Distribute Client
☐ Distribute Engineer
☐ Distribute Municipality
☐ Distribute Contractor
☐ Distribute Architect
☐ Distribute Other 1
☐ Distribute Other 2
☐ Distribute Other 3

Reviewed By: Hale, Alan
Tested By: Norgar, Jason NO

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Report

Report Number: 34664

A.A.R. Testing Laboratory, Inc. 7126 180th Ave.N.E., Park 180, Suite C101, Redmond, WA 98052 Phone 425.881.5812 Fax 425.881.5441

Client: Wyser Construction
17125 Sunset Road
Bothell, WA 98012

Contact:

Project Number: 03-100
Permit #: NA
Project Name: Edmonds Unocal
Address: Pine Street

Date: 5/5/03 **Time:** 12:30:00 PM **Temperature:** 50

Arrived onsite at 7:30 AM for scheduled compaction testing. Contractor notified me that testing was not suppose to be until the next day but he would have some other material to test in about 2 hours. I drove to lab and returned to job site at 10:00 AM. Waited onsite until 12:30 PM without taken any tests and then was dispatched to another job.

Distribution:
- [x] Distribute Client
- [ ] Distribute Engineer
- [ ] Distribute Municipality
- [ ] Distribute Architect
- [ ] Distribute Contractor
- [ ] Distribute Owner
- [ ] Distribute Other
- [ ] Distribute Other

Inspector: Flint, Sean FLI 90 4238
Reviewed by: Kim Anderson

Field Density Report - Nuclear Method

Report Number 3202

AAR Testing Laboratory, Inc. 7126 180th Ave. NE, Park 180, Suite C101, Redmond, WA 98052 Phone 425.881.5812 Fax 425.881.5441

Client:	Wyser Construction	Project Number	03-100
Contact:		Project Name:	Edmonds Unocal
Address:	17125 Sunset Road	Address:	Pine Street
	Bothell, WA 98012	Permit Number:	NA
Date:	5/7/03	Time:	

Material Data

Material Description: Dark brown sand with
Layer Thickness: Unknown
Source: Import from Ballinger
Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: CPN MC1DR MD11000507
Test Methods: Soil ASTM D2922, ASTM D3017
☑ DirectTransmission ☐ Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Counts

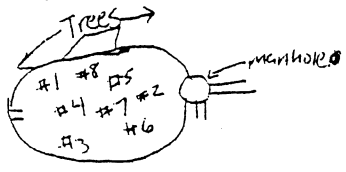
Density Count: 39205 Moisture Count: 10654

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	Birm for 2604 Swail 4th Lift	139.4	10.4	126.2	128.4	98%
2		138.5	10.8	125	128.4	97%
3		138.8	10.5	125.6	128.4	98%
4	6th Lift	139.3	10.7	125.8	128.4	98%
5		138.8	10.9	125.1	128.4	97%

Compaction Requirements: 95 % ☑ Conformance ☐ Non Conformance

Remarks/Specifications

Observed hydraulic pumping during rolling. Material was thoroughly compacted in small lifts. Optimum moisture is 7.1%.



Drawing not to scale.
N →

☑ Distribute Client
☐ Distribute Engineer
☐ Distribute Municipality
☐ Distribute Contractor
☐ Distribute Architect
☐ Distribute Other 1
☐ Distribute Other 2
☐ Distribute Other 3

Reviewed By: Hale, Alan
Tested By: Randolph, Tara

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3202

A.A.R Testing Laboratory, Inc. 7126 180th Ave. N.E. Park 180, Suite C101, Redmond, WA 98052 Phone 425.881.5812 Fax 425.881.5441

Client:	Wyser Construction	**Project Number**	03-100
Contact:		**Project Name:**	Edmonds Unocal
Address:	17125 Sunset Road Bothell, WA 98012	**Address:**	Pine Street
		Permit Number:	NA
Date:	5/7/03	**Time:**	

Material Data

Material Description: Dark brown sand with
Layer Thickness: Unknown
Source: Import from Ballinger
Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: CPN MC1DR MD11000507
Test Methods: Soil ASTM D2922, ASTM D3017
☑ DirectTransmission ☐ Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

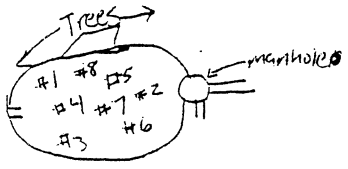
Density Count: 39205 Moisture Count: 10654

Test #	Locations/Elevations		Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
6	Birm for 2604 Swail	8th Lift	139.5	10.3	126.5	128.4	99%
7	↓	↓	139.2	10.4	126	128.4	98%
8			140	10.8	126.3	128.4	98%

Compaction Requirements: 95 % ☑ Conformance ☐ Non Conformance

Remarks/Specifications

Observed hydraulic pumping during rolling. Material was thoroughly compacted in small lifts. Optimum moisture is 7.1%.



Drawing not to scale.
N →

☑ Distribute Client
☐ Distribute Engineer
☐ Distribute Municipality
☐ Distribute Contractor
☐ Distribute Architect
☐ Distribute Other 1
☐ Distribute Other 2
☐ Distribute Other 3

Reviewed By: Hale, Alan
Tested By: Randolph, Tara

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3126a

A.A.R Testing Laboratory, Inc. 7126 180th Ave. N.E., Park 180, Suite C101, Redmond, WA 98052 Phone 425.881.5812 Fax 425.881.5441

Client:	Wyser Construction	**Project Number**	**03-100**
Contact:		**Project Name:**	Edmonds Unocal
Address:	17125 Sunset Road Bothell, WA 98012	**Address:**	Pine Street
		Permit Number:	NA
Date:	5/21/03	**Time:**	10:30:00 AM

Material Data

Material Description: Sand with minimal agg
Layer Thickness: Unknown
Source: Rinker
Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 21240
Test Methods: Soil ASTM D2922, ASTM D3017
☑ DirectTransmission ☐ Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

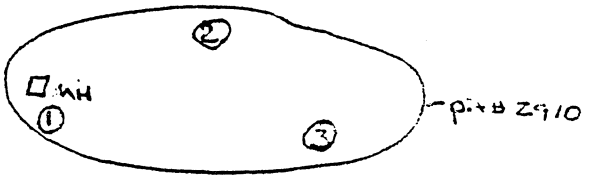
Standard Count

Density Count: 2240 Moisture Count: 655

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	Pit 2910 Final Grade	120.1	7.4	111.8	112.4	99%
2	↓	116.2	9.3	106.3	112.4	95%
3		121.6	8.7	111.8	112.4	99%

Compaction Requirements: 95 % ☑ Conformance ☐ Non Conformance

Remarks/Specifications
Drawing not to scale.



☑ Distribute Client ☐ Distribute Other 1
☐ Distribute Engineer ☐ Distribute Other 2
☐ Distribute Municipality ☐ Distribute Other 3
☐ Distribute Contractor
☐ Distribute Architect

Reviewed By: Hale, Alan
Tested By: Norgar, Jason NO

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3125a

A.A.R Testing Laboratory, Inc. 7126 180th Ave. N.E., Park 180, Suite C101, Redmond, WA 98052 Phone 425.881.5812 Fax 425.881.5441

Client:	Wyser Construction	**Project Number**	03-100
Contact:		**Project Name:**	Edmonds Unocal
Address:	17125 Sunset Road	**Address:**	Pine Street
	Bothell, WA 98012	**Permit Number:**	NA
Date:	5/21/03	**Time:**	10:00:00 AM

Material Data

Material Description: Sand with minimal agg
Layer Thickness: Unknown
Source: Rinker
Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 21240
Test Methods: Soil ASTM D2922, ASTM D3017
☑ DirectTransmission ☐ Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

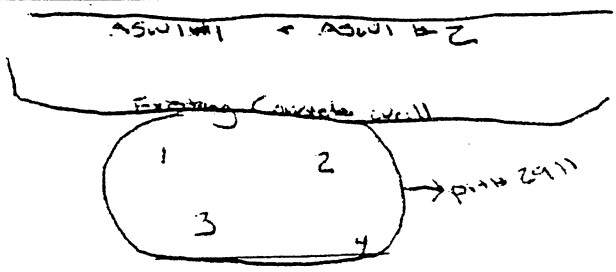
Standard Count

Density Count: 2240 Moisture Count: 655

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	Pit #2911 Final grade	123.9	11.9	110.7	112.4	98%
2		123.8	10.6	112	112.4	100%
3		121.6	8.7	111.8	112.4	99%
4		120.4	7.5	112	112.4	100%

Compaction Requirements: 95 % ☑ Conformance ☐ Non Conformance

Remarks/Specifications
Drawing not to scale.



☑ Distribute Client ☐ Distribute Other 1
☐ Distribute Engineer ☐ Distribute Other 2
☐ Distribute Municipality ☐ Distribute Other 3
☐ Distribute Contractor
☐ Distribute Architect

Reviewed By: Hale, Alan
Tested By: Norgar, Jason NO

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3124

A.A.R Testing Laboratory, Inc. 7126 180th Ave. N.E., Park 180, Suite C101, Redmond, WA 98052 Phone 425.881.5812 Fax 425.881.5441

Client:	Wyser Construction	**Project Number**	03-100
Contact:		**Project Name:**	Edmonds Unocal
Address:	17125 Sunset Road	**Address:**	Pine Street
	Bothell, WA 98012	**Permit Number:**	NA
Date:	5/21/03	**Time:**	8:00:00 AM

Material Data

Material Description: Sand with minimal agg
Layer Thickness: Unknown
Source: Rinker
Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 21240
Test Methods: Soil ASTM D2922, ASTM D3017
☑ DirectTransmission ☐ Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

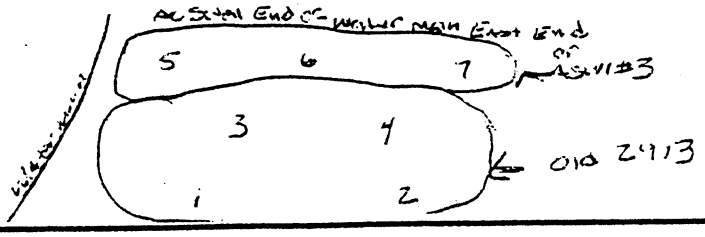
Density Count: 2240 Moisture Count: 655

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	Old 2913 South of ASW #3 Final grade	117.5	10.1	106.7	112.4	95%
2		119.3	10.5	108	112.4	96%
3		121.6	8.7	111.8	112.4	99%
4		120.4	7.5	112	112.4	100%
5	North of the AWSI #3 Old pit #2913	120.2	8	111.2	112.4	99%

Compaction Requirements: 95 % ☑ Conformance ☐ Non Conformance

Remarks/Specifications

Noticed there was some clay mixed with sand which is believed to be the cause of high moisture content. Sand appeared firm and unyielding.



☑ Distribute Client ☐ Distribute Other 1
☐ Distribute Engineer ☐ Distribute Other 2
☐ Distribute Municipality ☐ Distribute Other 3
☐ Distribute Contractor
☐ Distribute Architect

Reviewed By: Hale, Alan
Tested By: Norgar, Jason NO

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3124

A.A.R Testing Laboratory, Inc. 7126 180th Ave. N.E., Park 180, Suite C101, Redmond, WA 98052 Phone 425.881.5812 Fax 425.881.5441

Client:	Wyser Construction	**Project Number**	**03-100**
Contact:		**Project Name:**	Edmonds Unocal
Address:	17125 Sunset Road	**Address:**	Pine Street
	Bothell, WA 98012	**Permit Number:**	NA
Date:	5/21/03	**Time:**	8:00:00 AM

Material Data

Material Description: Sand with minimal agg
Layer Thickness: Unknown
Source: Rinker
Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 21240
Test Methods: Soil ASTM D2922, ASTM D3017
☑ DirectTransmission ☐ Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

Density Count: 2240 Moisture Count: 655

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
6	↓	131.9	17.8	111.9	112.4	100%
7		132.8	18.6	111.1	112.4	99%

Compaction Requirements: 95 % ☑ Conformance ☐ Non Conformance

Remarks/Specifications

Noticed there was some clay mixed with sand which is believed to be the cause of high moisture content. Sand appeared firm and unyielding.

☑ Distribute Client ☐ Distribute Other 1
☐ Distribute Engineer ☐ Distribute Other 2
☐ Distribute Municipality ☐ Distribute Other 3
☐ Distribute Contractor
☐ Distribute Architect

Reviewed By: Hale, Alan
Tested By: Norgar, Jason NO

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3201a

A.A.R Testing Laboratory, Inc. 7126 180th Ave. N.E., Park 180, Suite C101, Redmond, WA 98052 Phone 425.881.5812 Fax 425.881.5441

Client:	Wyser Construction	**Project Number**	03-100
Contact:		**Project Name:**	Edmonds Unocal
Address:	17125 Sunset Road	**Address:**	Pine Street
	Bothell, WA 98012	**Permit Number:**	NA
Date:	5/15/03	**Time:**	10:00:00 AM

Material Data

Material Description: Sand with minimal agg
Layer Thickness: 2'
Source: Rinker/Ballinger
Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 28462
Test Methods: Soil ASTM D2922, ASTM D3017
☑ DirectTransmission ☐ Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

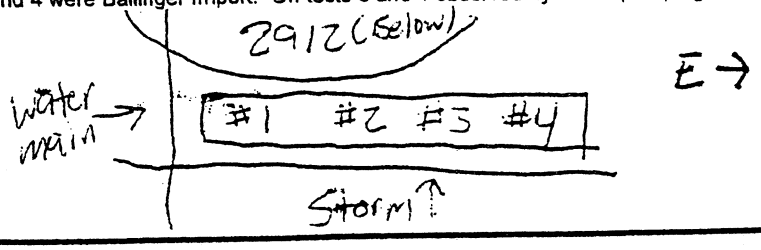
Density Count: 2657 Moisture Count: 633

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	AC Swale East of water main	117.5	6.4	110.4	112.4	98%
2		116.1	6.8	108.7	112.4	97%
3		134.6	13.8	118.3	128.4	92%
4		138.3	13.9	121.4	128.4	95%

Compaction Requirements: 90 % ☑ Conformance ☐ Non Conformance

Remarks/Specifications

Tests 1 and 2 were on sand and 3 and 4 were Ballinger Import. On tests 3 and 4 observed hydraulic pumping during rolling. Drawing not to scale



☑ Distribute Client ☐ Distribute Other 1
☐ Distribute Engineer ☐ Distribute Other 2
☐ Distribute Municipality ☐ Distribute Other 3
☐ Distribute Contractor
☐ Distribute Architect

Reviewed By: Hale, Alan
Tested By: Randolph, Tara

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3200a

AAR Testing Laboratory, Inc. 7126 180th Ave. N.E. Park 180, Suite C101, Redmond, WA 98052 Phone 425.881.5812 Fax 425.881.5441

Client:	Wyser Construction	**Project Number**	**03-100**
Contact:		**Project Name:**	Edmonds Unocal
Address:	17125 Sunset Road	**Address:**	Pine Street
	Bothell, WA 98012	**Permit Number:**	NA
Date:	5/15/03	**Time:**	10:00:00 AM

Material Data

Material Description: Import
Layer Thickness: Unknown
Source: Ballinger
Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 28462
Test Methods: Soil ASTM D2922, ASTM D3017
☑ DirectTransmission ☐ Back Scatter

Laboratory Test Methods

Modified Proctor ASTM D1557

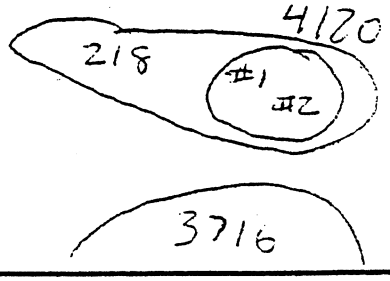
Standard Count

Density Count: 2657 Moisture Count: 633

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	Final Lift Pit 4120	134	7.4	124.7	128.4	97%
2	↓	136.6	7.4	127.1	128.4	99%

Compaction Requirements: 95 % ☑ Conformance ☐ Non Conformance

Remarks/Specifications



☑ Distribute Client ☐ Distribute Other 1
☐ Distribute Engineer ☐ Distribute Other 2
☐ Distribute Municipality ☐ Distribute Other 3
☐ Distribute Contractor
☐ Distribute Architect

Reviewed By: Hale, Alan
Tested By: Randolph, Tara

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Report

Report Number: 34664

A.A.R. Testing Laboratory, Inc. 7126 180th Ave N.E. Park 180, Suite C101, Redmond, WA 98052 Phone 425.881.5812 Fax 425.881.5441

Client: Wyser Construction
17125 Sunset Road
Bothell, WA 98012

Contact:

Project Number: 03-100
Permit #: NA
Project Name: Edmonds Unocal
Address: Pine Street

Date: 5/5/03 **Time:** 12:30:00 PM **Temperature:** 50

Arrived onsite at 7:30 AM for scheduled compaction testing. Contractor notified me that testing was not suppose to be until the next day but he would have some other material to test in about 2 hours. I drove to lab and returned to job site at 10:00 AM. Waited onsite until 12:30 PM without taken any tests and then was dispatched to another job.

Distribution:
- [x] Distribute Client
- [ ] Distribute Engineer
- [ ] Distribute Municipality
- [ ] Distribute Architect
- [ ] Distribute Contractor
- [ ] Distribute Owner
- [ ] Distribute Other
- [ ] Distribute Other

Inspector: Flint, Sean FLI 90 4238
Reviewed by: Kim Anderson

Field Density Report - Nuclear Method

Report Number 3217

A-A-R Testing Laboratory, Inc. 2126 180th Ave. N.E. Park 180 Suite C101, Redmond, WA 98052 Phone 425.881.5812 Fax 425.881.5441

Client:	Wyser Construction	Project Number	03-100
Contact:		Project Name:	Edmonds Unocal
Address:	17125 Sunset Road	Address:	Pine Street
	Bothell, WA 98012	Permit Number:	NA
Date:	5/12/03	Time:	10:30:00 AM

Material Data

Material Description: Sand with minimal agg
Layer Thickness: Unknown
Source: Rinker
Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 21240
Test Methods: Soil ASTM D2922, ASTM D3017
☑ DirectTransmission ☐ Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

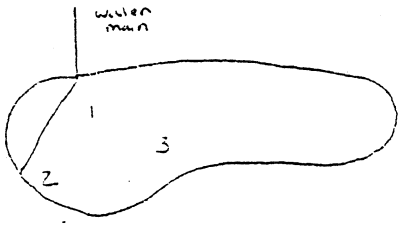
Density Count: 2236 Moisture Count: 650

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	Top of water main See sketch	118.9	9.7	108.4	112.4	96%
2	↓	117.5	8.6	108.2	112.4	96%
3		118.8	9.2	108.8	112.4	97%

Compaction Requirements: 95 % ☑ Conformance ☐ Non Conformance

Remarks/Specifications

Final Lift. Drawing not to scale.



☑ Distribute Client
☐ Distribute Engineer
☐ Distribute Municipality
☐ Distribute Contractor
☐ Distribute Architect
☐ Distribute Other 1
☐ Distribute Other 2
☐ Distribute Other 3

Reviewed By: Hale, Alan
Tested By: Norgar, Jason NO

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3216

A A R Testing Laboratory, Inc. 7126 180th Ave. N.E., Park 180, Suite C101, Redmond, WA 98052 Phone 425 881 5812 Fax 425 881 5441

Client:	Wyser Construction	Project Number	03-100
Contact:		Project Name:	Edmonds Unocal
Address:	17125 Sunset Road Bothell, WA 98012	Address:	Pine Street
		Permit Number:	NA
Date:	5/12/03	Time:	7:35:00 AM

Material Data

Material Description: Sand with minimal agg
Layer Thickness: Unknown
Source: Rinker
Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 21240
Test Methods: Soil ASTM D2922, ASTM D3017
☑ DirectTransmission ☐ Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

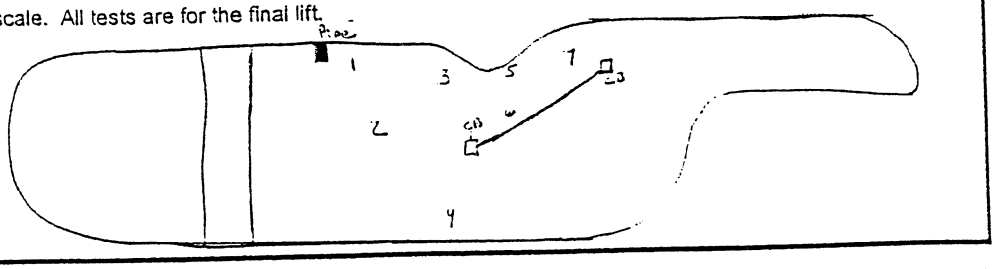
Density Count: 2236 Moisture Count: 650

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	North half of pit #2604 Final grade See sketch	114.6	6.9	107.2	112.4	95%
2		115.4	8	106.9	112.4	95%
3		116.6	7.5	108.5	112.4	97%
4		116	8	107.4	112.4	96%
5	South half of pit 2604 top of CB See sketch	114.5	6.8	107.2	112.4	95%

Compaction Requirements: 95 % ☑ Conformance ☐ Non Conformance

Remarks/Specifications

Drawing not to scale. All tests are for the final lift.



☑ Distribute Client
☐ Distribute Engineer
☐ Distribute Municipality
☐ Distribute Contractor
☐ Distribute Architect
☐ Distribute Other 1
☐ Distribute Other 2
☐ Distribute Other 3

Reviewed By: Hale, Alan
Tested By: Norgar, Jason NO

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3216

A.A.R Testing Laboratory, Inc. 7126 180th Ave. N.E. Park 180, Suite C101, Redmond, WA. 98052 Phone 425.881.5812 Fax 425.881.5441

Client:	Wyser Construction	Project Number	03-100
Contact:		Project Name:	Edmonds Unocal
Address:	17125 Sunset Road	Address:	Pine Street
	Bothell, WA 98012	Permit Number:	NA
Date:	5/12/03	Time:	7:35:00 AM

Material Data

Material Description: Sand with minimal agg
Layer Thickness: Unknown
Source: Rinker
Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 21240
Test Methods: Soil ASTM D2922, ASTM D3017
☑ DirectTransmission ☐ Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

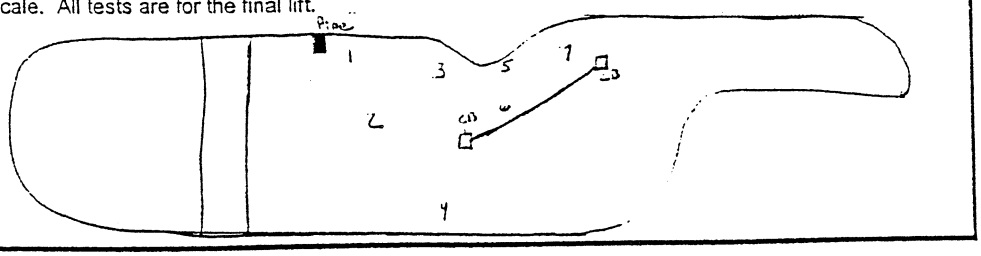
Density Count: 2236 Moisture Count: 650

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
6	↓	115.6	7.2	107.8	112.4	96%
7		111.7	4.9	106.5	112.4	95%

Compaction Requirements: 95 % ☑ Conformance ☐ Non Conformance

Remarks/Specifications

Drawing not to scale. All tests are for the final lift.



☑ Distribute Client
☐ Distribute Engineer
☐ Distribute Municipality
☐ Distribute Contractor
☐ Distribute Architect
☐ Distribute Other 1
☐ Distribute Other 2
☐ Distribute Other 3

Reviewed By: Hale, Alan
Tested By: Norgar, Jason NO

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3202

AAR Testing Laboratory, Inc. [illegible] Suite C101, Redmond, WA [illegible] 98052 [illegible]

Client:	Wyser Construction	Project Number	03-100
Contact:		Project Name:	Edmonds Unocal
Address:	17125 Sunset Road Bothell, WA 98012	Address:	Pine Street
		Permit Number:	NA
Date:	5/7/03	Time:	

Material Data

Material Description: Dark brown sand with
Layer Thickness: Unknown
Source: Import from Ballinger
Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: CPN MC1DR MD11000507
Test Methods: Soil ASTM D2922, ASTM D3017
☑ DirectTransmission ☐ Back Scatter

[illegible]

Modified Proctor ASTM D1557

Standard Count

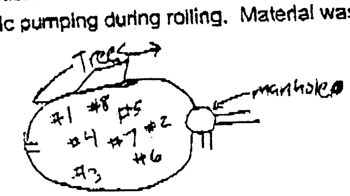
Density Count 39205 Moisture Count: 10654

Test #	Locations/Elevations		Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	Birm for 2604 Swall ↓	4th Lift ↓	139.4	10.4	126.2	128.4	98%
2			138.5	10.8	125	128.4	97%
3			138.8	10.5	125.8	128.4	98%
4		6th Lift ↓	139.3	10.7	125.8	128.4	98%
5			138.8	10.9	125.1	128.4	97%

Compaction Requirements: 95 % ☑ Conformance ☐ Non Conformance

Remarks/Specifications

Observed hydraulic pumping during rolling. Material was thoroughly compacted in small lifts. Optimum moisture is 7.1%.



Drawing not to scale.
N→

☑ Distribute Client
☐ Distribute Engineer
☐ Distribute Municipality
☐ Distribute Contractor
☐ Distribute Architect
☐ Distribute Other 1
☐ Distribute Other 2
☐ Distribute Other 3

Reviewed By: Hale, Alan
Tested By: Randolph, Tara

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3202

A A R Testing Laboratory, Inc. 7126 180th Ave. NE, Park 180, Suite C101, Redmond, WA 98052 Phone 425 881-5441

Client:	Wyser Construction	**Project Number**	03-100
Contact:		**Project Name:**	Edmonds Unocal
Address:	17125 Sunset Road Bothell, WA 98012	**Address:**	Pine Street
		Permit Number:	NA
Date:	5/7/03	**Time:**	

Material Data

Material Description: Dark brown sand with
Layer Thickness: Unknown
Source: Import from Ballinger
Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: CPN MC1DR MD11000507
Test Methods: Soil ASTM D2922, ASTM D3017
☑ DirectTransmission ☐ Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

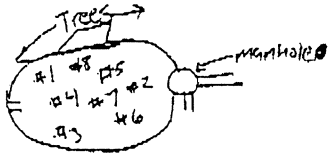
Density Count: 39205 Moisture Count: 10654

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
6	Birm for 2604 Swall 8th Lift	139.5	10.3	126.5	128.4	99%
7		139.2	10.4	126	128.4	98%
8		140	10.8	126.3	128.4	98%

Compaction Requirements: 95 % ☑ Conformance ☐ Non Conformance

Remarks/Specifications

Observed hydraulic pumping during rolling. Material was thoroughly compacted in small lifts. Optimum moisture is 7.1%.



Drawing not to scale.
N →

☑ Distribute Client ☐ Distribute Other 1
☐ Distribute Engineer ☐ Distribute Other 2
☐ Distribute Municipality ☐ Distribute Other 3
☐ Distribute Contractor
☐ Distribute Architect

Reviewed By: Hale, Alan
Tested By: Randolph, Tara

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3212

AAR Testing Laboratory, Inc. [illegible] 180th Ave NE [illegible] Park 180, Suite C101 Redmond, WA 98052 Phone 425-881-5812 Fax 425-881-5441

Client:	Wyser Construction	**Project Number**	03-100
Contact:		**Project Name:**	Edmonds Unocal
Address:	17125 Sunset Road Bothell, WA 98012	**Address:**	Pine Street
		Permit Number:	NA
Date:	5/5/03	**Time:**	2:40:00 PM

Material Data

Material Description: Dark Brown Pit Run M

Layer Thickness: Unknown

Source: Import from Ballinger

Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 019274

Test Methods: Soil ASTM D2922, ASTM D3017

☑ DirectTransmission ☐ Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

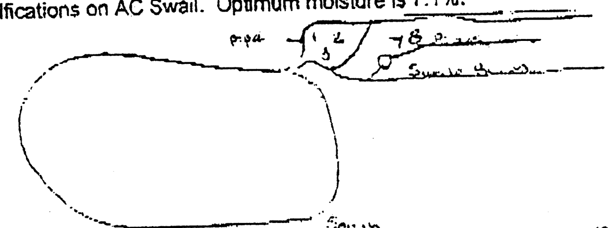
Density Count: 2267 Moisture Count: 641

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	1st Lift for the Swail Birm See Sketch	139.8	9.1	128.1	128.4	100%
2	↓ ↓	137.6	9.8	125.3	128.4	98%
3	↓ ↓	137.5	9.5	123.9	128.4	96%
4	2nd Lift for the Swail Birm	135.7	9.5	123.9	128.4	96%
5	↓ ↓	134.9	9.8	122.9	128.4	96%

Compaction Requirements: 90 % ☑ Conformance ☐ Non Conformance

Remarks/Specifications

No specifications on AC Swail. Optimum moisture is 7.1%.



Drawing Not to Scale

☑ Distribute Client	☐ Distribute Other 1
☐ Distribute Engineer	☐ Distribute Other 2
☐ Distribute Municipality	☐ Distribute Other 3
☐ Distribute Contractor	
☐ Distribute Architect	

Reviewed By: Hale, Alan

Tested By: Norgar, Jason NO

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3212

AAR Testing Laboratory, Inc. 12618 80th Ave. N.E. Park 180 Suite C101 Redmond, WA 98052 Phone: 425.881.5812 Fax: 425.881.5441

Client:	Wyser Construction	**Project Number**	03-100
Contact:		**Project Name:**	Edmonds Unocal
Address:	17125 Sunset Road Bothell, WA 98012	**Address:**	Pine Street
		Permit Number:	NA
Date:	5/5/03	**Time:**	2:40:00 PM

Material Data

Material Description: Dark Brown Pit Run M
Layer Thickness: Unknown
Source: Import from Ballinger
Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 019274
Test Methods: Soil ASTM D2922, ASTM D3017
☑ DirectTransmission ☐ Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

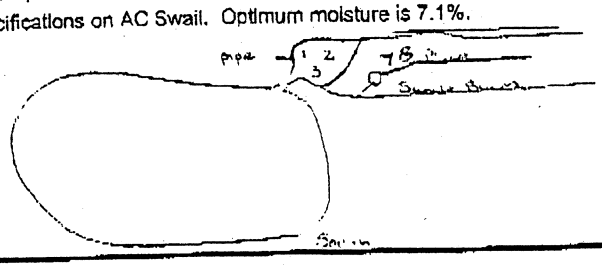
Standard Count

Density Count: 2267 Moisture Count: 641

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
6	2nd Lift for the Swail Birm	136.6	9.6	124.6	128.4	97%
7	1st Lift for pipe into manhole	121.7	10.1	110.5	112.4	98%
8	↓	119.6	10.6	108.1	112.4	96%

Compaction Requirements: 90 % ☑ Conformance ☐ Non Conformance

Remarks/Specifications
No specifications on AC Swail. Optimum moisture is 7.1%.



☑ Distribute Client ☐ Distribute Other 1
☐ Distribute Engineer ☐ Distribute Other 2
☐ Distribute Municipality ☐ Distribute Other 3
☐ Distribute Contractor
☐ Distribute Architect

Reviewed By: Hale, Alan
Tested By: Norgar, Jason NO

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3139a

AAR Testing Laboratory Inc. [illegible] Suite C101 Redmond WA
98052 Phone [illegible]

Client:	Wyser Construction	Project Number	03-100
Contact:		Project Name:	Edmonds Unocal
Address:	17125 Sunset Road Bothell, WA 98012	Address:	Pine Street
		Permit Number:	NA
Date:	5/2/03	Time:	8:15:00 AM

Material Data

Material Description: Sand with minimal agg
Layer Thickness: Various
Source: Rinker
Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 28462
Test Methods: Soil ASTM D2922, ASTM D3017
☑ DirectTransmission ☐ Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

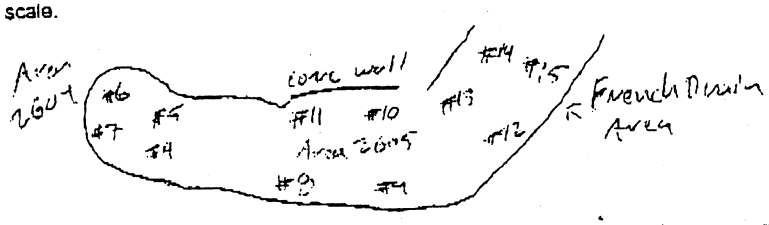
Standard Count

Density Count: 2673 Moisture Count: 635

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	Area 2604 See Sketch Below	114.7	7.3	106.9	112.4	95%
2		115.8	4.5	110.8	112.4	99%
3		113.1	4.5	108.2	112.4	96%
4		113.4	4.7	108.3	112.4	96%
5	Area 2605 See Sketch Below	118.3	5.9	111.7	112.4	99%

Compaction Requirements: 95 % ☑ Conformance ☐ Non Conformance

Remarks/Specifications
Drawing not to scale.



☑ Distribute Client ☐ Distribute Other 1
☐ Distribute Engineer ☐ Distribute Other 2
☐ Distribute Municipality ☐ Distribute Other 3
☐ Distribute Contractor
☐ Distribute Architect

Reviewed By: Hale, Alan
Tested By: Flint, Sean FLI 90

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3139a

AAR Testing Laboratory, Inc. 7126 180th Ave. N.E. Park 180, Suite C101, Redmond, WA 98052 Phone 425-881-5812 Fax 425-881-5441

Client:	Wyser Construction	Project Number	03-100
Contact:		Project Name:	Edmonds Unocal
Address:	17125 Sunset Road Bothell, WA 98012	Address:	Pine Street
		Permit Number:	NA
Date:	5/2/03	Time:	8:15:00 AM

Material Data

Material Description: Sand with minimal agg

Layer Thickness: Various

Source: Rinker

Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 28462

Test Methods: Soil ASTM D2922, ASTM D3017

☑ DirectTransmission ☐ Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Counts

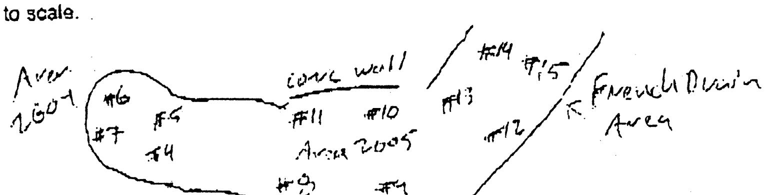
Density Count: 2673 Moisture Count: 635

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
6	Area 2605 See Sketch Below	116.1	5.5	110.1	112.4	98%
7	↓	114.9	5.1	109.3	112.4	97%
8	↓	116.8	6.2	109.9	112.4	98%
9	French Drain Area	117.9	6.5	110.7	112.4	98%
10	↓	115.4	6.5	108.4	112.4	96%

Compaction Requirements: 95 % ☑ Conformance ☐ Non Conformance

Remarks/Specifications

Drawing not to scale.



☑ Distribute Client ☐ Distribute Other 1
☐ Distribute Engineer ☐ Distribute Other 2
☐ Distribute Municipality ☐ Distribute Other 3
☐ Distribute Contractor
☐ Distribute Architect

Reviewed By: Hale, Alan

Tested By: Flint, Sean FLI 90

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3139a

AAR Testing Laboratory, Inc. 7126 180th Ave N.E. Park 180 Suite C101 Redmond, WA 98052 Phone [illegible] Fax 425-881-5441

Client: Wyser Construction
Contact:
Address: 17125 Sunset Road
Bothell, WA 98012
Date: 5/2/03

Project Number 03-100
Project Name: Edmonds Unocal
Address: Pine Street
Permit Number: NA
Time: 8:15:00 AM

Material Data

Material Description: Sand with minimal agg
Layer Thickness: Various
Source: Rinker
Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 28462
Test Methods: Soil ASTM D2922, ASTM D3017
☑ DirectTransmission ☐ Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

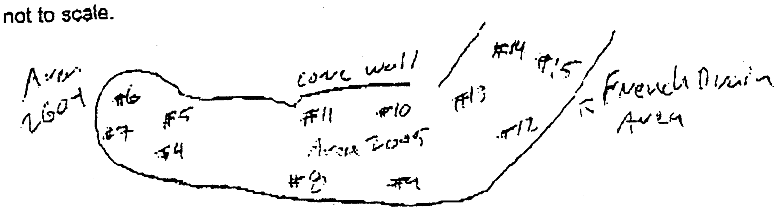
Standard Count

Density Count: 2673 Moisture Count: 635

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
11	↓	113.9	6.8	106.6	112.4	95%
12		116.3	7.1	108.6	112.4	97%

Compaction Requirements: 95 % ☑ Conformance ☐ Non Conformance

Remarks/Specifications
Drawing not to scale.



☑ Distribute Client ☐ Distribute Other 1
☐ Distribute Engineer ☐ Distribute Other 2
☐ Distribute Municipality ☐ Distribute Other 3
☐ Distribute Contractor
☐ Distribute Architect

Reviewed By: Hale, Alan
Tested By: Flint, Sean FLI 90

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3138a

A & R Testing Laboratory, Inc. [illegible] 180th Ave N E Park 180 Suite C101 Redmond, WA 98052 Phone 425 881 5812 Fax 425 88[illegible] 5441

Client: Wyser Construction

Contact:

Address: 17125 Sunset Road
Bothell, WA 98012

Date: 5/2/03

Project Number 03-100

Project Name: Edmonds Unocal

Address: Pine Street

Permit Number: NA

Time: 8:00:00 AM

Material Data

Material Description: Sand with minimal agg

Layer Thickness: Various

Source: Rinker

Compaction Method: 95

Test Device

Nuclear Gauge: Troxler 3430 28462

Test Methods: Soil ASTM D2922, ASTM D3017

☑ DirectTransmission ☐ Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Counts

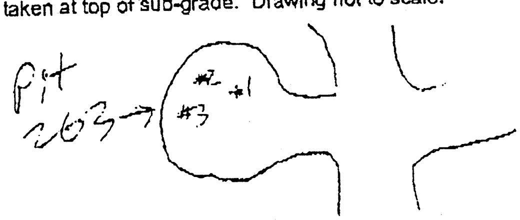
Density Count: 2673 Moisture Count: 635

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	Pit 263 See Sketch Below	117.3	7.4	109.2	112.4	97%
2	↓	116.1	7.4	108.1	112.4	96%
3		117.8	7.1	110	112.4	98%

Compaction Requirements: 95 % ☑ Conformance ☐ Non Conformance

Remarks/Specifications

All Tests taken at top of sub-grade. Drawing not to scale.



☑ Distribute Client
☐ Distribute Engineer
☐ Distribute Municipality
☐ Distribute Contractor
☐ Distribute Architect
☐ Distribute Other 1
☐ Distribute Other 2
☐ Distribute Other 3

Reviewed By: Hale, Alan

Tested By: Flint, Sean FLI 90

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3137a

AAR Testing Laboratory, Inc. 7126 180th Ave. N.E., Park 180, Suite C101, Redmond, WA 98052 Phone 425.881.5812 Fax 425.881.5441

Client:	Wyser Construction	**Project Number**	**03-100**
Contact:		**Project Name:**	Edmonds Unocal
Address:	17125 Sunset Road	**Address:**	Pine Street
	Bothell, WA 98012	**Permit Number:**	NA
Date:	4/28/03	**Time:**	2:30:00 AM

Material Data

Material Description: Sand with minimal agg
Layer Thickness: Varies
Source: Rinker
Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 28462
Test Methods: Soil ASTM D2922, ASTM D3017
☑ DirectTransmission ☐ Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

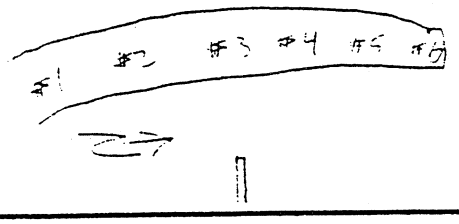
Density Count: 2667 Moisture Count: 644

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	See Sketch Below	119.6	9.6	108.6	112.4	97%
2		119	8.7	109.5	112.4	97%
3		117.9	8.3	108.9	112.4	97%
4		121	9	111	112.4	99%
5		120.5	9.9	109.7	112.4	98%

Compaction Requirements: 95 % ☑ Conformance ☐ Non Conformance

Remarks/Specifications

Drawing not to scale. All tests were taken at the top of sub grade over the drainage spine.



☑ Distribute Client
☐ Distribute Engineer
☐ Distribute Municipality
☐ Distribute Contractor
☐ Distribute Architect
☐ Distribute Other 1
☐ Distribute Other 2
☐ Distribute Other 3

Reviewed By: Hale, Alan
Tested By: Flint, Sean FLI 90

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3137a

A-A-R Testing Laboratory, Inc. 7126 180th Ave. N.E., Park 180, Suite C101, Redmond, WA 98052 Phone 425.881.5812 Fax 425.881.5441

Client:	Wyser Construction	Project Number	03-100
Contact:		Project Name:	Edmonds Unocal
Address:	17125 Sunset Road	Address:	Pine Street
	Bothell, WA 98012	Permit Number:	NA
Date:	4/28/03	Time:	2:30:00 AM

Material Data

Material Description: Sand with minimal agg
Layer Thickness: Varies
Source: Rinker
Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 28462
Test Methods: Soil ASTM D2922, ASTM D3017
☑ DirectTransmission ☐ Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

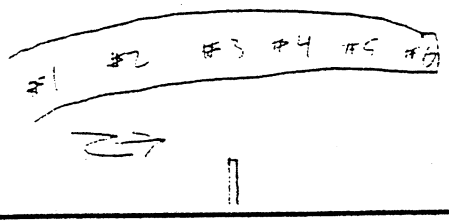
Density Count: 2667 Moisture Count: 644

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
6	See Sketch Below	119.8	10	108.9	112.4	97%

Compaction Requirements: 95 % ☑ Conformance ☐ Non Conformance

Remarks/Specifications

Drawing not to scale. All tests were taken at the top of sub grade over the drainage spine.



☑ Distribute Client
☐ Distribute Engineer
☐ Distribute Municipality
☐ Distribute Contractor
☐ Distribute Architect
☐ Distribute Other 1
☐ Distribute Other 2
☐ Distribute Other 3

Reviewed By: Hale, Alan
Tested By: Flint, Sean FLI 90

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3198

A A R Testing Laboratory Inc [illegible] Redmond, WA [illegible]

Client:	Wyser Construction	Project Number	03-100
Contact:		Project Name:	Edmonds Unocal
Address:	17125 Sunset Road Bothell, WA 98012	Address:	Pine Street
		Permit Number:	NA
Date:	4/25/03	Time:	

Material Data

Material Description: Sand with minimal agg

Layer Thickness: Unknown

Source: Rinker

Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: CPN MC1DR MD11000507

Test Methods: Soil ASTM D2922, ASTM D3017

☑ DirectTransmission ☐ Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

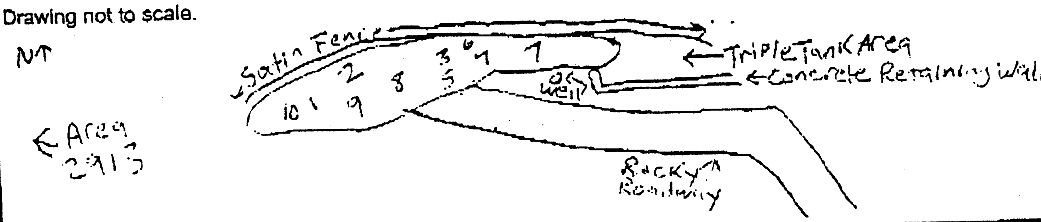
Density Count: 39203 Moisture Count: 10656

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	Parrell to French Drain Area NE half 8th Lift See Sketch	122.9	10.8	110.9	112.4	99%
2	↓	117	10	106.4	112.4	95%
3	↓	115.6	10.3	104.8	112.4	93%
4	SE half of French Drain 80' from Well	116.4	10.6	105.3	112.4	94%

Compaction Requirements: 90 % ☑ Conformance ☐ Non Conformance

Remarks/Specifications

Drawing not to scale.



☑ Distribute Client	☐ Distribute Other 1	Reviewed By:	Hale, Alan
☐ Distribute Engineer	☐ Distribute Other 2	Tested By:	Randolph, Tara
☐ Distribute Municipality	☐ Distribute Other 3		
☐ Distribute Contractor			
☐ Distribute Architect			

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3198

A A R Testing Laboratory, Inc 7126 180th Ave N.E. Park 180, Suite C101 Redmond, WA 98052 Phone 425-881-58[illegible] Fax 425-881-5441

Client:	Wyser Construction	**Project Number**	03-100
Contact:		**Project Name:**	Edmonds Unocal
Address:	17125 Sunset Road Bothell, WA 98012	**Address:**	Pine Street
		Permit Number:	NA
Date:	4/25/03	**Time:**	

Material Data

Material Description: Sand with minimal agg

Layer Thickness: Unknown

Source: Rinker

Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: CPN MC1DR MD11000507

Test Methods: Soil ASTM D2922, ASTM D3017

☑ DirectTransmission ☐ Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

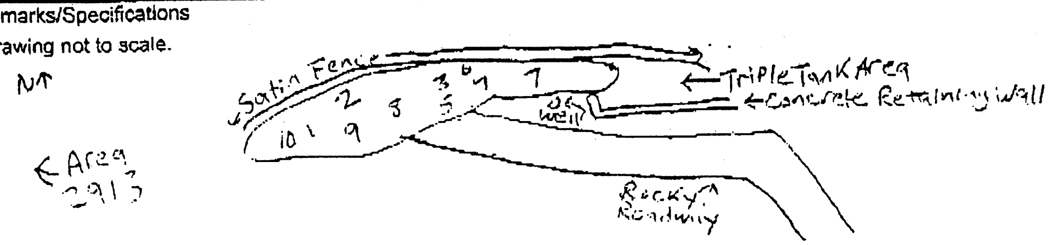
Density Count: 39203 Moisture Count: 10656

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
5	SE half of French Drain 80' from Well	119.8	11.7	107.2	112.4	95%
6	↓	117.7	11.54	105.6	112.4	94%
7	Triple Tank Area See Sketch	118.8	11.2	106.8	112.4	95%
8	NE half of French Drain Area	120.3	10.8	108.6	112.4	97%
9	NE half parreil to French Drain 12th Lift	120.4	10.6	108.9	112.4	97%

Compaction Requirements: 90 % ☑ Conformance ☐ Non Conformance

Remarks/Specifications

Drawing not to scale.



☑ Distribute Client
☐ Distribute Engineer
☐ Distribute Municipality
☐ Distribute Contractor
☐ Distribute Architect
☐ Distribute Other 1
☐ Distribute Other 2
☐ Distribute Other 3

Reviewed By: Hale, Alan

Tested By: Randolph, Tara

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3198

AAR Testing Laboratory, Inc. 7126 180th Ave N.E. Park 180 Suite C101 Redmond WA 98052 Phone 425-881-5812 Fax 425-881-5441

Client: Wyser Construction

Contact:

Address: 17125 Sunset Road
Bothell, WA 98012

Date: 4/25/03

Project Number 03-100

Project Name: Edmonds Unocal

Address: Pine Street

Permit Number: NA

Time:

Material Data

Material Description: Sand with minimal agg

Layer Thickness: Unknown

Source: Rinker

Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: CPN MC1DR MD11000507

Test Methods: Soil ASTM D2922, ASTM D3017

☑ DirectTransmission ☐ Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

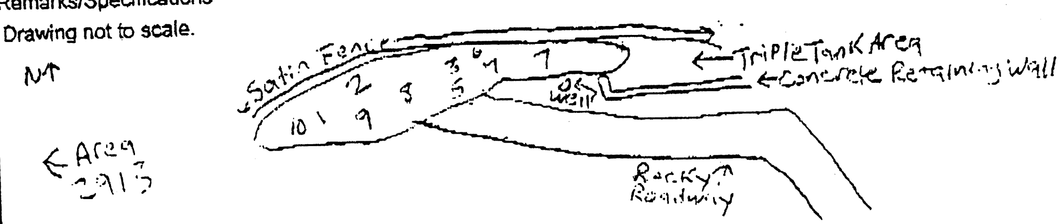
Density Count: 39203 Moisture Count: 10656

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
10	NE half parrell to French Drain 12 Lift	119.6	11.3	107.5	112.4	96%

Compaction Requirements: 90 % ☑ Conformance ☐ Non Conformance

Remarks/Specifications

Drawing not to scale.



☑ Distribute Client
☐ Distribute Engineer
☐ Distribute Municipality
☐ Distribute Contractor
☐ Distribute Architect
☐ Distribute Other 1
☐ Distribute Other 2
☐ Distribute Other 3

Reviewed By: Hale, Alan

Tested By: Randolph, Tara

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3189a

A A R Testing Laboratory, Inc. 7126 180th Ave N.E., Bldg 180, Suite C101, Redmond, WA 98052 Phone 425 881 5812 Fax 425 881 5441

Client: Wyser Construction

Contact:

Address: 17125 Sunset Road
Bothell, WA 98012

Date: 4/23/03

Project Number 03-100

Project Name: Edmonds Unocal

Address: Pine Street

Permit Number: NA

Time: 12:20:00 PM

Material Data

Material Description: Sand with minimal agg

Layer Thickness: Unknown

Source: Rinker

Compaction Method: Hoe Pack

Test Device

Nuclear Gauge: Troxler 3430 21240

Test Methods: Soil ASTM D2922, ASTM D3017

☑ DirectTransmission ☐ Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

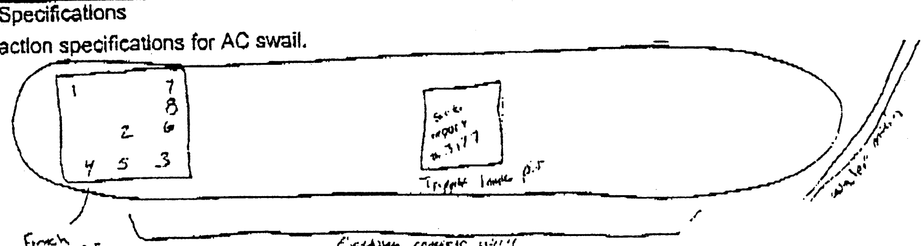
Density Count: 2671 Moisture Count: 646

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	AC Swail Pit French Drain 2nd Lift See Sketch	110.9	8.8	101.9	112.4	91%
2	↓	110	9.1	100.8	112.4	90%
3	↓	111.3	9.5	101.7	112.4	90%
4	↓	114.1	10.4	103.5	112.4	92%
5	AC Swall French Drain 2nd Lift See Map	114.3	10.4	103.5	112.4	92%

Compaction Requirements: 90 % ☑ Conformance ☐ Non Conformance

Remarks/Specifications

No compaction specifications for AC swail.



☑ Distribute Client
☐ Distribute Engineer
☐ Distribute Municipality
☐ Distribute Contractor
☐ Distribute Architect
☐ Distribute Other 1
☐ Distribute Other 2
☐ Distribute Other 3

Reviewed By: Hale, Alan

Tested By: Norgar, Jason NO

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3189a

A A R Testing Laboratory Inc 7126 180th Ave NE Park 180 Suite C101, Redmond WA 98052 Phone 425 881 5812 Fax 425 881 5441

Client:	Wyser Construction	Project Number	03-100
Contact:		Project Name:	Edmonds Unocal
Address:	17125 Sunset Road Bothell, WA 98012	Address:	Pine Street
		Permit Number:	NA
Date:	4/23/03	Time:	12:20:00 PM

Material Data

Material Description: Sand with minimal agg

Layer Thickness: Unknown

Source: Rinker

Compaction Method: Hoe Pack

Test Device

Nuclear Gauge: Troxler 3430 21240

Test Methods: Soil ASTM D2922, ASTM D3017

☑ DirectTransmission ☐ Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

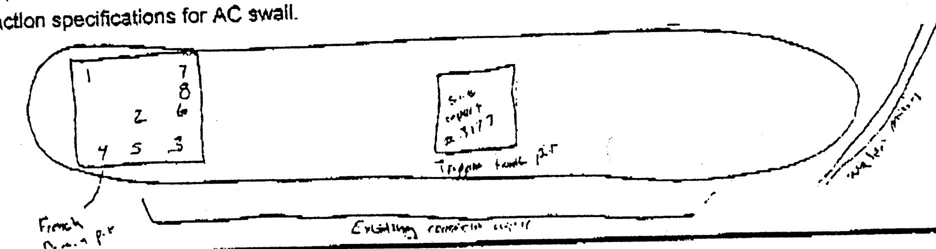
Density Count: 2671 Moisture Count: 646

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
6	AC Swail French Drain 3rd Lift See Map	113.6	10.1	103.2	112.4	92%
7	↓	117.3	9.8	106.8	112.4	95%
8	↓	113.7	10	103.4	112.4	92%

Compaction Requirements: 90 % ☑ Conformance ☐ Non Conformance

Remarks/Specifications

No compaction specifications for AC swail.



☑ Distribute Client
☐ Distribute Engineer
☐ Distribute Municipality
☐ Distribute Contractor
☐ Distribute Architect
☐ Distribute Other 1
☐ Distribute Other 2
☐ Distribute Other 3

Reviewed By: Hale, Alan

Tested By: Norgar, Jason NO

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3177a

A A R Testing Laboratory, Inc. 7126 180th Ave. N.E. Park 180, Suite C101, Redmond, WA 98052 Phone 425 881 5812 Fax 425 881 5441

Client:	Wyser Construction	Project Number	03-100
Contact:		Project Name:	Edmonds Unocal
Address:	17125 Sunset Road Bothell, WA 98012	Address:	Pine Street
		Permit Number:	NA
Date:	4/23/03	Time:	8:30:00 AM

Material Data

Material Description: Sand with minimal
Layer Thickness: Unknown
Source: Rinker
Compaction Method: Hoe Pack

Test Device

Nuclear Gauge: Troxler 3430 28462
Test Methods: Soil ASTM D2922, ASTM D3017
☑ DirectTransmission ☐ Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

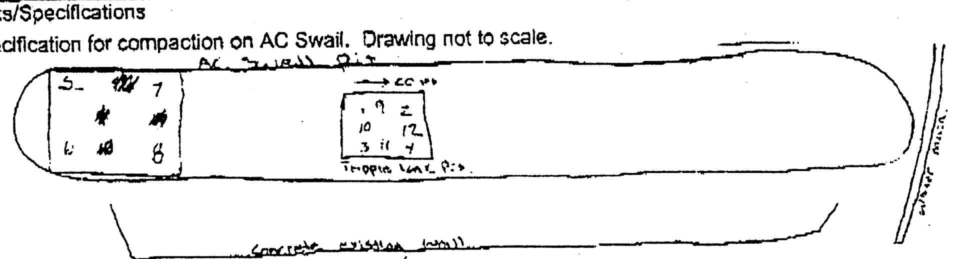
Density Count: 2671 Moisture Count: 646

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	AC Swail Pit Triple Tank Farm 1st Lift	120.5	17.8	102.3	112.4	91%
2	↓	122.7	14.6	107.1	112.4	95%
3		122.3	16.9	104.6	112.4	93%
4		118.2	14.4	103.3	112.4	92%
5	AC Swail Pit French Drain 1st Lift	115.1	12.3	102.5	112.4	91%

Compaction Requirements: 90 % ☑ Conformance ☐ Non Conformance

Remarks/Specifications

No specification for compaction on AC Swail. Drawing not to scale.



☑ Distribute Client
☐ Distribute Engineer
☐ Distribute Municipality
☐ Distribute Contractor
☐ Distribute Architect
☐ Distribute Other 1
☐ Distribute Other 2
☐ Distribute Other 3

Reviewed By: Hale, Alan
Tested By: Norgar, Jason NO

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3177a

AAR Testing Laboratory, Inc. 17626 180th Ave. N.E. Park 180 Suite G101, Redmond, WA 98052 Phone: 425.861.5812 Fax: 425.881.5441

Client:	Wyser Construction	**Project Number**	03-100
Contact:		**Project Name:**	Edmonds Unocal
Address:	17125 Sunset Road Bothell, WA 98012	**Address:**	Pine Street
		Permit Number:	NA
Date:	4/23/03	**Time:**	8:30:00 AM

Material Data

Material Description: Sand with minimal
Layer Thickness: Unknown
Source: Rinker
Compaction Method: Hoe Pack

Test Device

Nuclear Gauge: Troxler 3430 28462
Test Methods: Soil ASTM D2922, ASTM D3017
☑ DirectTransmission ☐ Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

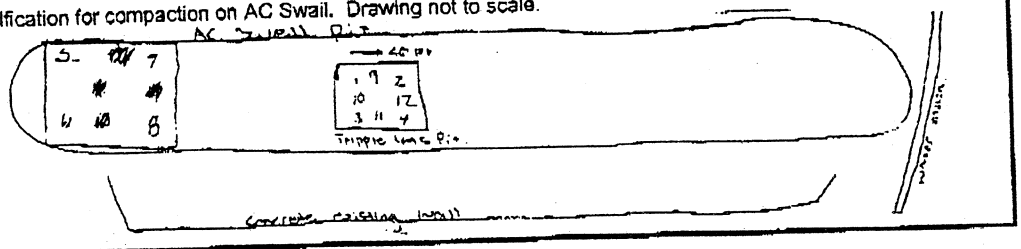
Standard Count

Density Count: 2671 Moisture Count: 646

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
6	Ac Swail Pit French Drain 1st Lift	119.6	12.9	105.9	112.4	94%
7		117.9	13	104.3	112.4	93%
8		120	14.1	105.2	112.4	94%
9	AC Swail Triple Tank Farm 2nd Lift	121.6	15.2	105.6	112.4	94%
10		120.7	16.1	103.9	112.4	92%

Compaction Requirements: 90 % ☑ Conformance ☐ Non Conformance

Remarks/Specifications
No specification for compaction on AC Swail. Drawing not to scale.



☑ Distribute Client ☐ Distribute Other 1
☐ Distribute Engineer ☐ Distribute Other 2
☐ Distribute Municipality ☐ Distribute Other 3
☐ Distribute Contractor
☐ Distribute Architect

Reviewed By: Hale, Alan
Tested By: Norgar, Jason NO

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3177a

A.A.R Testing Laboratory, Inc 7126 180th Ave NE, Park 180, Suite C101, Redmond, WA 98052 Phone 425.881.5812 Fax 425.881.5441

Client: Wyser Construction

Contact:

Address: 17125 Sunset Road
Bothell, WA 98012

Date: 4/23/03

Project Number 03-100

Project Name: Edmonds Unocal

Address: Pine Street

Permit Number: NA

Time: 8:30:00 AM

Material Data

Material Description: Sand with minimal

Layer Thickness: Unknown

Source: Rinker

Compaction Method: Hoe Pack

Test Device

Nuclear Gauge: Troxler 3430 28462

Test Methods: Soil ASTM D2922, ASTM D3017

☑ DirectTransmission ☐ Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

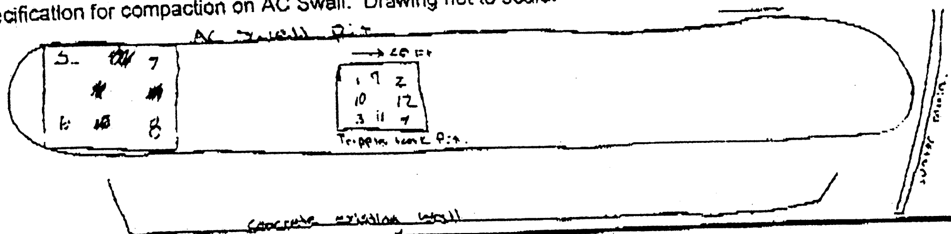
Density Count 2671 Moisture Count: 646

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
11	↓	122.9	16.2	105.8	112.4	94%
12		122.1	15.6	105.6	112.4	94%

Compaction Requirements: 90 % ☑ Conformance ☐ Non Conformance

Remarks/Specifications

No specification for compaction on AC Swail. Drawing not to scale.



☑ Distribute Client
☐ Distribute Engineer
☐ Distribute Municipality
☐ Distribute Contractor
☐ Distribute Architect
☐ Distribute Other 1
☐ Distribute Other 2
☐ Distribute Other 3

Reviewed By: Hale, Alan

Tested By: Norgar, Jason NO

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3136a

AAR Testing Laboratory, Inc. 7126 180th Ave NE, Part 180, Suite C101, Redmond, WA 98052 Phone 425.881.5812 Fax 425.881.5411

Client:	Wyser Construction	**Project Number**	**03-100**
Contact:		**Project Name:**	Edmonds Unocal
Address:	17125 Sunset Road Bothell, WA 98012	**Address:**	Pine Street
		Permit Number:	NA
Date:	4/22/03	**Time:**	11:00:00 AM

Material Data

Material Description: Sand with minimal agg
Layer Thickness: Unknown
Source: Import from Ballinger
Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 28462
Test Methods: Soil ASTM D2922, ASTM D3017
☑ DirectTransmission ☐ Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

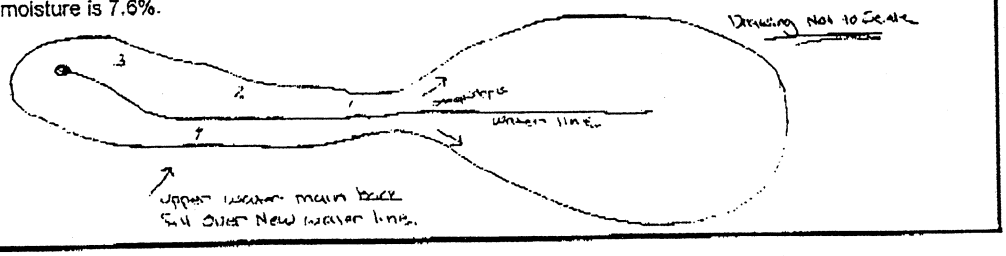
Standard Count

Density Count: 2653 Moisture Count: 646

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	Upper Water Line 1st Lift 1 1/2' over pipe	114.2	10	103.8	112.4	92%
2		113.9	9.5	104	112.4	93%
3		111.1	8.5	102.4	112.4	91%
4		112.3	9.7	102.4	112.4	91%

Compaction Requirements: 90 % ☑ Conformance ☐ Non Conformance

Remarks/Specifications
Optimum moisture is 7.6%.



☑ Distribute Client ☐ Distribute Other 1
☐ Distribute Engineer ☐ Distribute Other 2
☐ Distribute Municipality ☐ Distribute Other 3
☐ Distribute Contractor
☐ Distribute Architect

Reviewed By: Hale, Alan
Tested By: Norgar, Jason NO

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3120a

A.A.R Testing Laboratory, Inc. [illegible] Ave N.E., Park 180 Suite C101 Redmond, WA 98052 Ph [illegible] Fax 425 881 5441

Client:	Wyser Construction	Project Number	03-100
Contact:		Project Name:	Edmonds Unocal
Address:	17125 Sunset Road Bothell, WA 98012	Address:	Pine Street
		Permit Number:	NA
Date:	4/22/03	Time:	9:00:00 AM

Material Data

Material Description: Sand with minimal agg

Layer Thickness: Unknown

Source: Rinker

Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 28462

Test Methods: Soil ASTM D2922, ASTM D3017

☑ DirectTransmission ☐ Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

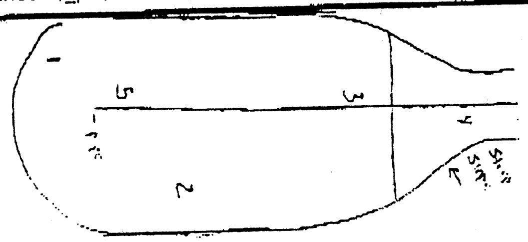
Density Count: 0 Moisture Count: 0

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	3rd Lift over Water Main Line	113.5	10.1	103.1	112.4	92%
2		111.9	9.6	102.1	112.4	91%
3		113.2	10.1	102.8	112.4	91%
4		113.5	9.4	103.7	112.4	92%
5		112.7	9.3	103.1	112.4	92%

Compaction Requirements: 90 % ☑ Conformance ☐ Non Conformance

Remarks/Specifications

Drawing not to scale.



☑ Distribute Client
☐ Distribute Engineer
☐ Distribute Municipality
☐ Distribute Contractor
☐ Distribute Architect
☐ Distribute Other 1
☐ Distribute Other 2
☐ Distribute Other 3

Reviewed By: Hale, Alan

Tested By: Norgar, Jason NO

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3187a

A A R Testing Laboratory, Inc. 7126 180th Ave NE Park 180 Suite C101, Redmond, WA 98052 Phone 425 881 5812 Fax 425 881 5441

Client:	Wyser Construction	**Project Number**	**03-100**
Contact:		**Project Name:**	Edmonds Unocal
Address:	17125 Sunset Road Bothell, WA 98012	**Address:**	Pine Street
		Permit Number:	NA
Date:	4/21/03	**Time:**	11:00:00 AM

Material Data

Material Description: Sand with minimal agg

Layer Thickness: Unknown

Source: Rinker

Compaction Method: 90

Test Device

Nuclear Gauge: Troxler 3430 28462

Test Methods: Soil ASTM D2922, ASTM D3017

☑ DirectTransmission ☐ Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

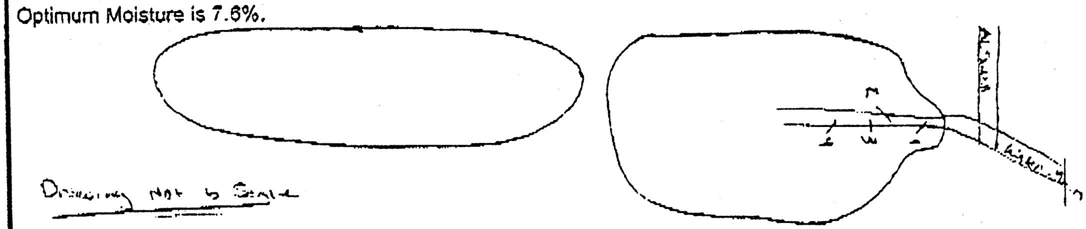
Density Count: 2668 Moisture Count: 649

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	Water Main Line 2nd Lift	117.7	9.8	107.2	112.4	95%
2	↓	115.8	11.5	103.9	112.4	92%
3	↓	116.9	10.2	105.3	112.4	94%
4	↓	116.5	9.9	106	112.4	94%

Compaction Requirements: 90 % ☑ Conformance ☐ Non Conformance

Remarks/Specifications

Optimum Moisture is 7.6%.



☑ Distribute Client
☐ Distribute Engineer
☐ Distribute Municipality
☐ Distribute Contractor
☐ Distribute Architect
☐ Distribute Other 1
☐ Distribute Other 2
☐ Distribute Other 3

Reviewed By: Hale, Alan

Tested By: Norgar, Jason NO

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3123a

A.A.R. Testing Laboratory, Inc. 3226 180th Ave N.E. Park 180 Suite C101 Redmond, WA 98052 Phone 425 881 5812 Fax 425 861 5441

Client:	Wyser Construction	**Project Number**	**03-100**
Contact:		**Project Name:**	Edmonds Unocal
Address:	17125 Sunset Road Bothell, WA 98012	**Address:**	Pine Street
		Permit Number:	NA
Date:	4/22/03	**Time:**	10:15:00 AM

Material Data

Material Description: Sand with minimal agg
Layer Thickness: Unknown
Source: Rinker
Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 28462
Test Methods: Soil ASTM D2922, ASTM D3017
☑ DirectTransmission ☐ Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

Density Count: 2653 Moisture Count: 646

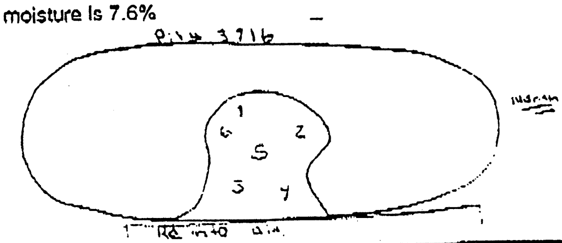
Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	1st Lift for Pit #3716 Middle section Only See Map	112.1	8.9	102.9	112.4	92%
2	↓	113.7	9.5	103.8	112.4	92%
3	↓	113.9	9.3	104.2	112.4	93%
4	2nd Lift Pit #3716	112.7	10	102.5	112.4	91%
5	↓	114.2	10.3	103.5	112.4	92%

Compaction Requirements: 90 % ☑ Conformance ☐ Non Conformance

Remarks/Specifications

Optimum moisture Is 7.6%

Drawing Not to Scale



☑ Distribute Client
☐ Distribute Engineer
☐ Distribute Municipality
☐ Distribute Contractor
☐ Distribute Architect
☐ Distribute Other 1
☐ Distribute Other 2
☐ Distribute Other 3

Reviewed By: Hale, Alan
Tested By: Norgar, Jason NO

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3123a

A A R Testing Laboratory, Inc. [illegible] 180th Ave N.E. Park 180 Suite C101 Redmond, WA 98052 Phone 425 881 5812 Fax 425 881 5441

Client:	Wyser Construction	Project Number	03-100
Contact:		Project Name:	Edmonds Unocal
Address:	17125 Sunset Road Bothell, WA 98012	Address:	Pine Street
		Permit Number:	NA
Date:	4/22/03	Time:	10:15:00 AM

Material Data

Material Description: Sand with minimal agg

Layer Thickness: Unknown

Source: Rinker

Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 28462

Test Methods: Soil ASTM D2922, ASTM D3017

☑ DirectTransmission ☐ Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

[illegible] Standard Count

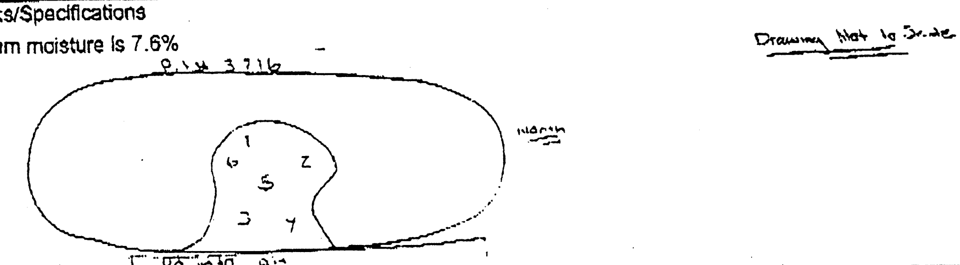
Density Count: 2653 Moisture Count: 646

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
6	2nd Lift Pit #3716	115	10.7	103.9	112.4	92%

Compaction Requirements: 90 % ☑ Conformance ☐ Non Conformance

Remarks/Specifications

Optimum moisture is 7.6%



☑ Distribute Client ☐ Distribute Other 1

☐ Distribute Engineer ☐ Distribute Other 2

☐ Distribute Municipality ☐ Distribute Other 3

☐ Distribute Contractor

☐ Distribute Architect

Reviewed By: Hale, Alan

Tested By: Norgar, Jason NO

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3186a

A-A-R Testing Laboratory, Inc. 7126 180th Ave. N.E. Park 180 Suite C101 Redmond, WA 98052 Phone 425.881.5812 Fax 425.881.5441

Client:	Wyser Construction	**Project Number**	03-100
Contact:		**Project Name:**	Edmonds Unocal
Address:	17125 Sunset Road	**Address:**	Pine Street
	Bothell, WA 98012	**Permit Number:**	NA
Date:	4/21/03	**Time:**	8:30:00 AM

Material Data

Material Description: Sand with minimal agg
Layer Thickness: Unknown
Source: Rinker
Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 28462
Test Methods: Soil ASTM D2922, ASTM D3017
☑ DirectTransmission ☐ Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

Density Count: 2668 Moisture Count: 649

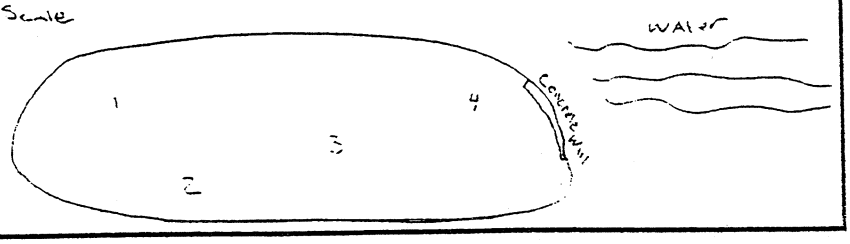
Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	Pit #2909 East Half 3rd Lift	117.8	10.6	106.4	112.4	95%
2		117.2	9.8	106.8	112.4	95%
3		116.8	9.7	106.5	112.4	95%
4		119.3	10.6	107.9	112.4	96%

Compaction Requirements: 90 % ☑ Conformance ☐ Non Conformance

Remarks/Specifications

Optimum Moisture is 7.6%.

Drawing Not to Scale



☑ Distribute Client
☐ Distribute Engineer
☐ Distribute Municipality
☐ Distribute Contractor
☐ Distribute Architect
☐ Distribute Other 1
☐ Distribute Other 2
☐ Distribute Other 3

Reviewed By: Hale, Alan
Tested By: Norgar, Jason NO

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3188a

A A R Testing Laboratory Inc. / 126 180th Ave. N.E. Park 180, Suite C101, Redmond, WA 98052 Phone 425.881.5812 Fax 425.881.5441

Client:	Wyser Construction	**Project Number**	**03-100**
Contact:		**Project Name:**	Edmonds Unocal
Address:	17125 Sunset Road	**Address:**	Pine Street
	Bothell, WA 98012	**Permit Number:**	NA
Date:	4/21/03	**Time:**	

Material Data

Material Description: Sand with minimal agg
Layer Thickness: Unknown
Source: Rinker
Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 28462
Test Methods: Soil ASTM D2922, ASTM D3017
☑ DirectTransmission ☐ Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

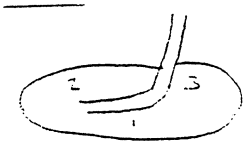
Density Count: 2668 Moisture Count: 649

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	U38 Excavation for the Storm Catch Basin, 8th Lift	120.2	13.1	106.3	112.4	95%
2		120.3	12.8	106.6	112.4	95%
3		119.3	10.6	107.9	112.4	96%

Compaction Requirements: 95 % ☑ Conformance ☐ Non Conformance

Remarks/Specifications

Optimum moisture is 7.6%.



Drawing Not to Scale.

☑ Distribute Client
☐ Distribute Engineer
☐ Distribute Municipality
☐ Distribute Contractor
☐ Distribute Architect
☐ Distribute Other 1
☐ Distribute Other 2
☐ Distribute Other 3

Reviewed By: Hale, Alan
Tested By: Norgar, Jason NO

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3195

A.A.R Testing Laboratory, Inc. 7126 180th Ave. N.E., Park 180, Suite C101, Redmond, WA 98052 Phone 425.881.5812 Fax 425.881.5441

Client:	Wyser Construction	**Project Number**	03-100
Contact:		**Project Name:**	Edmonds Unocal
Address:	17125 Sunset Road	**Address:**	Pine Street
	Bothell, WA 98012	**Permit Number:**	NA
Date:	4/18/03	**Time:**	12:00:00 PM

Material Data

Material Description: Sand with minimal agg
Layer Thickness: Unknown
Source: Rinker
Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 21240
Test Methods: Soil ASTM D2922, ASTM D3017
☑ DirectTransmission ☐ Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

Density Count: 2284 Moisture Count: 584

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	Pit 2909 East half 1st Lift	117.1	12	104.5	112.4	93%
2		117.7	11.5	105.6	112.4	94%
3		120.1	12.9	106.3	112.4	95%
4	Pit 2909 East half 2nd Lift	120.3	12.8	106.6	112.4	95%
5		119.8	11.8	107.2	112.4	95%

Compaction Requirements: 95 % ☑ Conformance ☐ Non Conformance

Remarks/Specifications
2nd Lift requires 95% compaction, which was achieved.

☑ Distribute Client
☐ Distribute Engineer
☐ Distribute Municipality
☐ Distribute Contractor
☐ Distribute Architect
☐ Distribute Other 1
☐ Distribute Other 2
☐ Distribute Other 3

Reviewed By: Hale, Alan
Tested By: Randolph, Tara

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

UP-02-916-1.07

Field Density Report - Nuclear Method

Report Number 3195

A.A.R Testing Laboratory, Inc. 7126 180th Ave. N.E. Park 180, Suite C101, Redmond, WA 98052 Phone 425.881.5812 Fax 425.881.5441

Client:	Wyser Construction	**Project Number**	03-100
Contact:		**Project Name:**	Edmonds Unocal
Address:	17125 Sunset Road	**Address:**	Pine Street
	Bothell, WA 98012	**Permit Number:**	NA
Date:	4/18/03	**Time:**	12:00:00 PM

Material Data

Material Description: Sand with minimal agg
Layer Thickness: Unknown
Source: Rinker
Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 21240
Test Methods: Soil ASTM D2922, ASTM D3017
☑ DirectTransmission ☐ Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

Density Count: 2284 Moisture Count: 584

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
6	↓ ↓ ↓	120	12.3	106.8	112.4	95%

Compaction Requirements: 95 % ☑ Conformance ☐ Non Conformance

Remarks/Specifications
2nd Lift requires 95% compaction, which was achieved.

☑ Distribute Client
☐ Distribute Engineer
☐ Distribute Municipality
☐ Distribute Contractor
☐ Distribute Architect
☐ Distribute Other 1
☐ Distribute Other 2
☐ Distribute Other 3

Reviewed By: Hale, Alan
Tested By: Randolph, Tara

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3194

A.A.R Testing Laboratory, Inc. 7126 180th Ave. N.E. Park 180, Suite C101, Redmond, WA 98052 Phone 425.881.5812 Fax 425.881.5441

Client:	Wyser Construction	**Project Number**	03-100
Contact:		**Project Name:**	Edmonds Unocal
Address:	17125 Sunset Road	**Address:**	Pine Street
	Bothell, WA 98012	**Permit Number:**	NA
Date:	4/18/03	**Time:**	12:00:00 PM

Material Data

Material Description: Sand with minimal agg
Layer Thickness: Unknown
Source: Rinker
Compaction Method: Hoe Pack

Test Device

Nuclear Gauge: Troxler 3430 21240
Test Methods: Soil ASTM D2922, ASTM D3017
☑ DirectTransmission ☐ Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

Density Count: 2284 Moisture Count: 584

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	Water Main Line	114.5	11	103.2	112.4	92%
2		120.2	13.1	106.2	112.4	94%
3		120.4	12.8	106.7	112.4	95%

Compaction Requirements: 90 % ☑ Conformance ☐ Non Conformance

Remarks/Specifications
Optimum moisture is 7.6%.

☑ Distribute Client
☐ Distribute Engineer
☐ Distribute Municipality
☐ Distribute Contractor
☐ Distribute Architect
☐ Distribute Other 1
☐ Distribute Other 2
☐ Distribute Other 3

Reviewed By: Hale, Alan
Tested By: Randolph, Tara

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3192

A.A.R Testing Laboratory, Inc. 7126 180th Ave. N.E. Park 180, Suite C101, Redmond, WA 98052 Phone 425.881.5812 Fax 425.881.5441

Client:	Wyser Construction	**Project Number**	**03-100**
Contact:		**Project Name:**	Edmonds Unocal
Address:	17125 Sunset Road	**Address:**	Pine Street
	Bothell, WA 98012	**Permit Number:**	NA
Date:	4/18/03	**Time:**	12:00:00 PM

Material Data

Material Description: Sand with minimal agg
Layer Thickness: Unknown
Source: Rinker
Compaction Method: Hoe Pack

Test Device

Nuclear Gauge: Troxler 3430 21240
Test Methods: Soil ASTM D2922, ASTM D3017
☑ DirectTransmission ☐ Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

Density Count: 2284 Moisture Count: 584

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	Receiving Storm Catch Basin 1st Lift	114.4	10.9	103.2	112.4	92%
2		115.2	11.1	103.6	112.4	92%
3	2nd Lift	115.9	10.8	104.6	112.4	93%
4		115.2	12.2	102.7	112.4	91%
5	3rd Lift	113.4	11	102.2	112.4	91%

Compaction Requirements: 90 % ☑ Conformance ☐ Non Conformance

Remarks/Specifications
Optimum moisture is 7.6%.

☑ Distribute Client
☐ Distribute Engineer
☐ Distribute Municipality
☐ Distribute Contractor
☐ Distribute Architect
☐ Distribute Other 1
☐ Distribute Other 2
☐ Distribute Other 3

Reviewed By: Hale, Alan
Tested By: Randolph, Tara

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3192

AAR Testing Laboratory, Inc. 7126 180th Ave. N.E., Park 180, Suite C101, Redmond, WA 98052 Phone 425.881.5812 Fax 425.881.5441

Client:	Wyser Construction	**Project Number**	**03-100**
Contact:		**Project Name:**	Edmonds Unocal
Address:	17125 Sunset Road	**Address:**	Pine Street
	Bothell, WA 98012	**Permit Number:**	NA
Date:	4/18/03	**Time:**	12:00:00 PM

Material Data

Material Description: Sand with minimal agg
Layer Thickness: Unknown
Source: Rinker
Compaction Method: Hoe Pack

Test Device

Nuclear Gauge: Troxler 3430 21240
Test Methods: Soil ASTM D2922, ASTM D3017
☑ DirectTransmission ☐ Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

Density Count: 2284 Moisture Count: 584

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
6		112.8	11.8	100.9	112.4	90%
7	4th Lift	114.3	11.5	102.5	112.4	91%
8		113.9	11.3	102.3	112.4	91%
9	5th Lift	116.2	11.4	104.5	112.4	93%
10		116.5	10.9	105	112.4	93%

Compaction Requirements: 90 % ☑ Conformance ☐ Non Conformance

Remarks/Specifications
Optimum moisture is 7.6%.

☑ Distribute Client
☐ Distribute Engineer
☐ Distribute Municipality
☐ Distribute Contractor
☐ Distribute Architect
☐ Distribute Other 1
☐ Distribute Other 2
☐ Distribute Other 3

Reviewed By: Hale, Alan
Tested By: Randolph, Tara

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3192

A.A.R Testing Laboratory, Inc. 7126 180th Ave. N.E. Park 180, Suite C101, Redmond, WA 98052 Phone 425.881.5812 Fax 425.881.5441

Client:	Wyser Construction	**Project Number**	03-100
Contact:		**Project Name:**	Edmonds Unocal
Address:	17125 Sunset Road	**Address:**	Pine Street
	Bothell, WA 98012	**Permit Number:**	NA
Date:	4/18/03	**Time:**	12:00:00 PM

Material Data

Material Description: Sand with minimal agg
Layer Thickness: Unknown
Source: Rinker
Compaction Method: Hoe Pack

Test Device

Nuclear Gauge: Troxler 3430 21240
Test Methods: Soil ASTM D2922, ASTM D3017
☑ DirectTransmission ☐ Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

Density Count: 2284 Moisture Count: 584

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
11	6th Lift	115.7	10.7	104.5	112.4	93%
12		114.9	11.2	103.3	112.4	92%
13	7th Lift	116.6	11.1	104.9	112.4	93%
14		116.5	12.3	103.7	112.4	92%

Compaction Requirements: 90 % ☑ Conformance ☐ Non Conformance

Remarks/Specifications
Optimum moisture is 7.6%.

☑ Distribute Client
☐ Distribute Engineer
☐ Distribute Municipality
☐ Distribute Contractor
☐ Distribute Architect
☐ Distribute Other 1
☐ Distribute Other 2
☐ Distribute Other 3

Reviewed By: Hale, Alan
Tested By: Randolph, Tara

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3027

A.A.R Testing Laboratory, Inc. 7126 180th Ave. N.E., Park 180, Suite C101, Redmond, WA 98052 Phone 425.881.5812 Fax 425.881.5441

Client:	Wyser Construction	Project Number	03-100
Contact:		Project Name:	Edmonds Unical
Address:	17125 Sunset Road	Address:	Pine Street
	Bothell, WA 98012	Permit Number:	NA
Date:	2/21/03	Time:	12:30:00 PM

Material Data

Material Description: Fine Silty Sand w/Agg.

Layer Thickness: 1'

Source:

Compaction Method: Roller

Test Device

Nuclear Gauge: Troxler 3430 21240

Test Methods: Soil ASTM D2922, ASTM D3017

☑ DirectTransmission ☐ Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

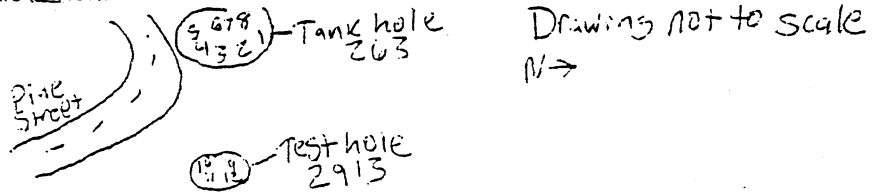
Density Count: 2266 Moisture Count: 644

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	Tank hole 263 upper section/See sketch below	119.2	9.2	109.1	112.4	97%
2		118.9	9.7	108.4	112.4	96%
3		116.3	10	105.7	112.4	94%
4		114.9	10.9	103.6	112.4	92%
5		112.8	11.9	100.8	112.4	90%

Compaction Requirements: 90 % ☑ Conformance ☐ Non Conformance

Remarks/Specifications

Optimum moisture @ 7.6%.



☑ Distribute Client ☐ Distribute Other 1

☐ Distribute Engineer ☐ Distribute Other 2

☐ Distribute Municipality ☐ Distribute Other 3

☐ Distribute Contractor

☐ Distribute Architect

Reviewed By: Alan Hale

Tested By: Tara Randolph Pfaf

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3037

AAR Testing Laboratory, Inc. 7126 180th Ave. N.E. Park 180, Suite C101, Redmond, WA. 98052 Phone 425.881.5812 Fax 425.881.5441

Client:	Wyser Construction	**Project Number**	03-100
Contact:		**Project Name:**	Edmonds Unocal
Address:	17125 Sunset Road	**Address:**	Pine Street
	Bothell, WA 98012	**Permit Number:**	NA
Date:	2/24/03	**Time:**	1:00:00 PM

Material Data

Material Description: Fine Silty Sand w/Min.
Layer Thickness: Unknown
Source: Import/Rinker
Compaction Method: Roller

Test Device

Nuclear Gauge: Troxler 3430 019274
Test Methods: Soil ASTM D2922, ASTM D3017
☑ DirectTransmission ☐ Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

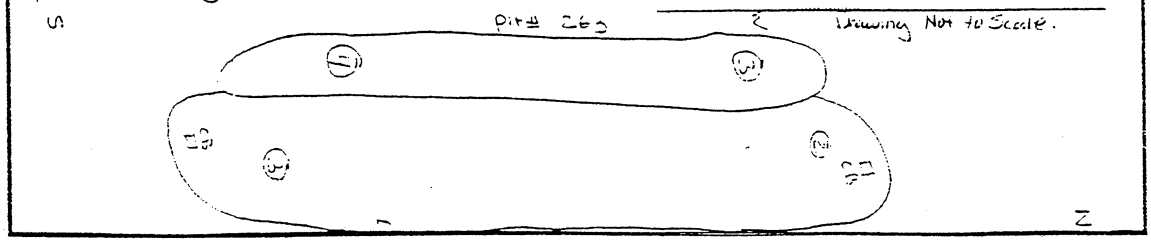
Standard Count

Density Count: 2296 Moisture Count: 651

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	Trench Back fill @ grade/See sketch for locations	117.6	9.6	107.3	112.4	95%
2	Trench back fill @ grade	119.7	9.7	109.1	112.4	97%
3	Trench back fill -4 1/2' below grade	110.9	8	102.7	112.4	91%
4	Trench back fill -4 1/2' below grade	113.6	8.1	105.1	112.4	94%

Compaction Requirements: 90 % ☑ Conformance ☐ Non Conformance

Remarks/Specifications
Optimum moisture @ 7.6%



☑ Distribute Client
☐ Distribute Engineer
☐ Distribute Municipality
☐ Distribute Contractor
☐ Distribute Architect
☐ Distribute Other 1
☐ Distribute Other 2
☐ Distribute Other 3

Reviewed By: Alan Hale
Tested By: Norgar, Jason NO

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 4959

A A R Testing Laboratory Inc. 7126 180th Ave. N.E. - Park 180, Suite C101, Redmond, WA 98052 Phone 425.881.5812 Fax 425.881.5441

Client:	Wyser Construction	**Project Number**	03-100
Contact:		**Project Name:**	Edmonds Unocal
Address:	17125 Sunset Road Bothell, WA 98012	**Address:**	Pine Street
		Permit Number:	NA
Date:	2/24/03	**Time:**	1:07:00 PM

Material Data

Material Description: Fine Silty Sand w/Min.
Layer Thickness: Unknown
Source: Import/Rinker
Compaction Method: Roller

Test Device

Nuclear Gauge: Troxler 3430 019274
Test Methods: Soil ASTM D2922, ASTM D3017
☑ DirectTransmission ☐ Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

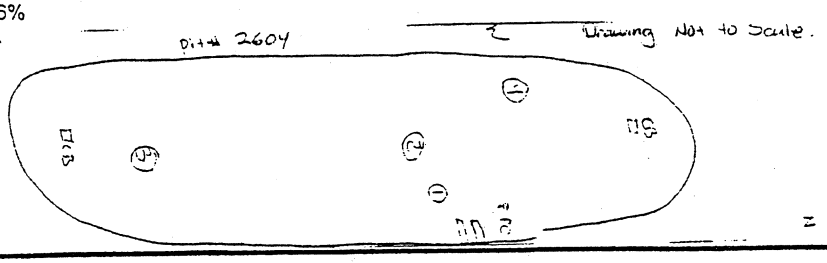
Standard Count

Density Count: 2296 Moisture Count: 651

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	Pit #2604 Back fill/See sketch below for locations/-6'	116.6	9	106.9	112.4	95%
2	-5'	115.9	8.7	106.6	112.4	95%
3	-4'	112.7	8.5	103.9	112.4	92%
4	-4'	114.6	9	105.1	112.4	94%

Compaction Requirements: 90 % ☑ Conformance ☐ Non Conformance

Remarks/Specifications
Optimum moisture @ 7.6%



☑ Distribute Client
☐ Distribute Engineer
☐ Distribute Municipality
☐ Distribute Contractor
☐ Distribute Architect
☐ Distribute Other 1
☐ Distribute Other 2
☐ Distribute Other 3

Reviewed By: Alan Hale
Tested By: Norgar, Jason NO

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 4960

A A R Testing Laboratory, Inc. 7126 180th Ave. N.E., Park 180, Suite C101, Redmond, WA 98052 Phone 425.881.5812 Fax 425.881.5441

Client:	Wyser Construction	**Project Number**	**03-100**
Contact:		**Project Name:**	Edmonds Unocal
Address:	17125 Sunset Road	**Address:**	Pine Street
	Bothell, WA 98012	**Permit Number:**	NA
Date:	2/24/03	**Time:**	2:00:00 PM

Material Data

Material Description: Fine Silty Sand w/Min.
Layer Thickness: Unknown
Source: Import/Rinker
Compaction Method: Roller

Test Device

Nuclear Gauge: Troxler 3430 019274
Test Methods: Soil ASTM D2922, ASTM D3017
☑ DirectTransmission ☐ Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

Density Count: 2296 Moisture Count: 651

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
6	-18'	117.1	9.7	106.8	112.4	95%

Compaction Requirements: 90 % ☑ Conformance ☐ Non Conformance

Remarks/Specifications
Optimum moisture @ 7.4%

☑ Distribute Client
☐ Distribute Engineer
☐ Distribute Municipality
☐ Distribute Contractor
☐ Distribute Architect
☐ Distribute Other 1
☐ Distribute Other 2
☐ Distribute Other 3

Reviewed By: Alan Hale
Tested By: Norgar, Jason NO

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 4960

AAR Testing Laboratory, Inc. 2126 180th Ave N.E. Park 180 Suite C101 Redmond, WA 98052 Phone 425.881.5812 Fax 425.881.5441

Client:	Wyser Construction	**Project Number**	03-100
Contact:		**Project Name:**	Edmonds Unocal
Address:	17125 Sunset Road Bothell, WA 98012	**Address:**	Pine Street
		Permit Number:	NA
Date:	2/24/03	**Time:**	2:00:00 PM

Material Data

Material Description: Fine Silty Sand w/Min.
Layer Thickness: Unknown
Source: Import/Rinker
Compaction Method: Roller

Test Device

Nuclear Gauge: Troxler 3430 019274
Test Methods: Soil ASTM D2922, ASTM D3017
☑ Direct Transmission ☐ Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

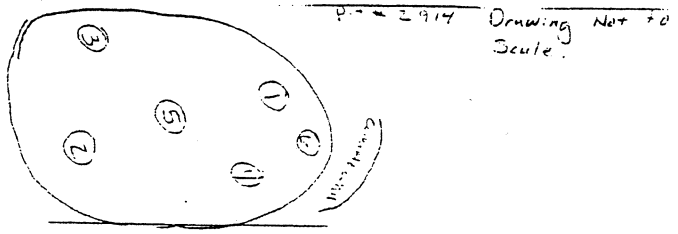
Standard Count

Density Count: 2296 Moisture Count: 651

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	Pit #2914 Trench back fill/See sketch below for locations/-4'	115.6	8.1	106.9	112.4	95%
2	-4'	112.5	8.7	103.4	112.4	92%
3	-3'	121.4	10.2	110.1	112.4	98%
4	-2.5'	120.1	11	108.2	112.4	96%
5	-1'	118.7	9.6	108.3	112.4	96%

Compaction Requirements: 90 % ☑ Conformance ☐ Non Conformance

Remarks/Specifications
Optimum moisture @ 7.4%



☑ Distribute Client
☐ Distribute Engineer
☐ Distribute Municipality
☐ Distribute Contractor
☐ Distribute Architect
☐ Distribute Other 1
☐ Distribute Other 2
☐ Distribute Other 3

Reviewed By: Alan Hale
Tested By: Norgar, Jason NO

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 4961

A-A-R Testing Laboratory, Inc. 7126 180th Ave. N.E. Park 180, Suite C101, Redmond, WA 98052 Phone 425.881.5812 Fax 425.881.5441

Client:	Wyser Construction	**Project Number**	03-100
Contact:		**Project Name:**	Edmonds Unocal
Address:	17125 Sunset Road	**Address:**	Pine Street
	Bothell, WA 98012	**Permit Number:**	NA
Date:	2/24/03	**Time:**	2:40:00 PM

Material Data

Material Description: Fine Silty Sand w/Min.
Layer Thickness: Unknown
Source: Import/Rinker
Compaction Method: Roller

Test Device

Nuclear Gauge: Troxler 3430 019274
Test Methods: Soil ASTM D2922, ASTM D3017
☑ Direct Transmission ☐ Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

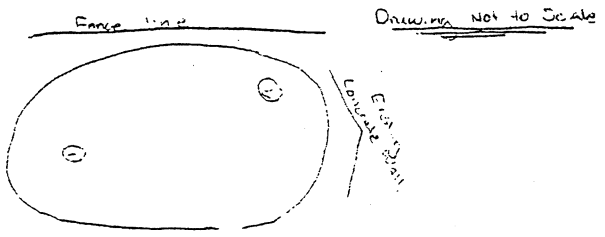
Standard Count

Density Count: 2296 Moisture Count: 651

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	Pit #2798 Trench Back fill -3'/See sketch below for locations	111.3	9.9	101.3	112.4	90%
2	-3'	112.5	8.7	103.4	112.4	92%

Compaction Requirements: 90 % ☑ Conformance ☐ Non Conformance

Remarks/Specifications
Optimum moisture @ 7.6%



☑ Distribute Client
☐ Distribute Engineer
☐ Distribute Municipality
☐ Distribute Contractor
☐ Distribute Architect
☐ Distribute Other 1
☐ Distribute Other 2
☐ Distribute Other 3

Reviewed By: Alan Hale
Tested By: Norgar, Jason NO

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3032

AAR Testing Laboratory, Inc. 7126 180th Ave. N.E. Park 180, Suite G101, Redmond, WA 98052 Phone 425.881.5812 Fax 425.881.5441

Client:	Wyser Construction	**Project Number**	**03-100**
Contact:		**Project Name:**	Edmonds Unical
Address:	17125 Sunset Road Bothell, WA 98012	**Address:**	Pine Street
		Permit Number:	NA
Date:	2/25/03	**Time:**	1:00:00 PM

Material Data

Material Description: Sand w/Min. Agg.

Layer Thickness: 1'

Source: Rinker

Compaction Method: Roller

Test Device

Nuclear Gauge: Troxler 3430 019274

Test Methods: Soil ASTM D2922, ASTM D3017

☑ DirectTransmission ☐ Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

Density Count: 2271 Moisture Count: 640

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
11	2914	120.6	9.8	109.9	112.4	98%
12	↓	121.5	10.1	110.3	112.4	98%

Compaction Requirements: 95 % ☑ Conformance ☐ Non Conformance

Remarks/Specifications

Optimum moisture @ 7.6%

☑ Distribute Client
☐ Distribute Engineer
☐ Distribute Municipality
☐ Distribute Contractor
☐ Distribute Architect
☐ Distribute Other 1
☐ Distribute Other 2
☐ Distribute Other 3

Reviewed By: Alan Hale

Tested By: Tara Randolph Pfaf

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3032

AAR Testing Laboratory, Inc. 7126 180th Ave. N.E., Park 180, Suite C101, Redmond, WA 98052 Phone 425.881.5812 Fax 425.881.5441

Client:	Wyser Construction	**Project Number**	**03-100**
Contact:		**Project Name:**	Edmonds Unical
Address:	17125 Sunset Road Bothell, WA 98012	**Address:**	Pine Street
		Permit Number:	NA
Date:	2/25/03	**Time:**	1:00:00 PM

Material Data

Material Description: Sand w/Min. Agg.
Layer Thickness: 1'
Source: Rinker
Compaction Method: Roller

Test Device

Nuclear Gauge: Troxler 3430 019274
Test Methods: Soil ASTM D2922, ASTM D3017
☑ DirectTransmission ☐ Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

Density Count: 2271 Moisture Count: 640

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
6	2798	116.9	9.4	106.9	112.4	95%
7	↓	116.7	7.9	108.1	112.4	96%
8	1749, last lift	119	9.6	108.5	112.4	97%
9	↓	117.6	9.5	107.4	112.4	96%
10	↓	118.1	7	110.4	112.4	98%

Compaction Requirements: 95 % ☑ Conformance ☐ Non Conformance

Remarks/Specifications
Optimum moisture @ 7.6%

☑ Distribute Client
☐ Distribute Engineer
☐ Distribute Municipality
☐ Distribute Contractor
☐ Distribute Architect
☐ Distribute Other 1
☐ Distribute Other 2
☐ Distribute Other 3

Reviewed By: Alan Hale
Tested By: Tara Randolph Pfaf

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3032

AAR Testing Laboratory, Inc. 12611 80th Ave. N.E., Park 180, Suite C101, Redmond, WA 98052 Phone 425.881.5812 Fax 425.881.5411

Client:	Wyser Construction	**Project Number**	03-100
Contact:		**Project Name:**	Edmonds Unical
Address:	17125 Sunset Road	**Address:**	Pine Street
	Bothell, WA 98012	**Permit Number:**	NA
Date:	2/25/03	**Time:**	1:00:00 PM

Material Data

Material Description: Sand w/Min. Agg.
Layer Thickness: 1'
Source: Rinker
Compaction Method: Roller

Test Device

Nuclear Gauge: Troxler 3430 019274
Test Methods: Soil ASTM D2922, ASTM D3017
☑ DirectTransmission ☐ Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

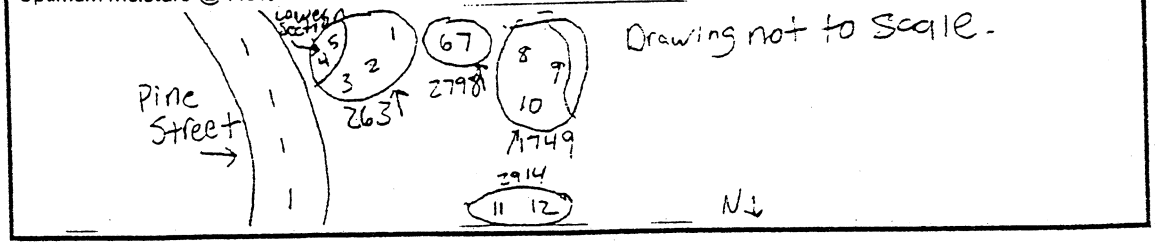
Standard Counts

Density Count: 2271 Moisture Count: 640

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	263 Upper section/See sketch below	115.8	9	106.3	112.4	95%
2	↓	117.7	9.3	107.7	112.4	96%
3		120.9	8.7	111.3	112.4	99%
4	263 lower section	123.7	10.1	112.3	112.4	100%
5	↓	122.9	9.8	111.9	112.4	100%

Compaction Requirements: 95 % ☑ Conformance ☐ Non Conformance

Remarks/Specifications
Optimum moisture @ 7.6%



☑ Distribute Client
☐ Distribute Engineer
☐ Distribute Municipality
☐ Distribute Contractor
☐ Distribute Architect
☐ Distribute Other 1
☐ Distribute Other 2
☐ Distribute Other 3

Reviewed By: Alan Hale
Tested By: Tara Randolph Pfaf

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 4970

A-A-R Testing Laboratory, Inc. 7126 180th Ave. N.E., Park 180, Suite C101 Redmond, WA 98052 Phone 425.881.5812 Fax 425.881.5441

Client:	Wyser Construction	**Project Number**	03-100
Contact:		**Project Name:**	Edmonds Unocal
Address:	17125 Sunset Road Bothell, WA 98012	**Address:**	Pine Street
		Permit Number:	NA
Date:	2/27/03	**Time:**	9:30:00 AM

Material Data

Material Description: Sand
Layer Thickness: Unknown
Source: Import
Compaction Method: Roller/Hoe Pack

Test Device

Nuclear Gauge: CPN MC1DR MD0069642
Test Methods: Soil ASTM D2922, ASTM D3017
☑ DirectTransmission ☐ Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

Density Count: 33077 Moisture Count: 8299

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
6	Backfill Pit #2604/-2'	118.9	10.6	107.5	112.4	96%
7	Backfill Pit #2604/-3'	116.8	10.5	105.7	112.4	94%
8	Backfill Pit #2604/-3'	117.3	10.5	106.2	112.4	94%
9	Backfill Pit #2910/ 1st lift/-6'	116.9	10.1	106.2	112.4	94%
10	Backfill Pit #2910/1st lift/-6'	117.1	10	106.4	112.4	95%

Compaction Requirements: 90 % ☑ Conformance ☐ Non Conformance

Remarks/Specifications
90% compaction specification @ -4'
95% compaction specification @ Grade
Optimum moisture @ 7.6%

☑ Distribute Client
☐ Distribute Engineer
☐ Distribute Municipality
☐ Distribute Contractor
☐ Distribute Architect
☐ Distribute Other 1
☐ Distribute Other 2
☐ Distribute Other 3

Reviewed By: Alan Hale
Tested By: Kent, Gena KEN 2

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 4970

A-A-R Testing Laboratory, Inc. 7126 180th Ave. N.E., Park 180, Suite C101, Redmond, WA 98052 Phone 425.881.5812 Fax 425.881.5441

Client:	Wyser Construction	**Project Number**	**03-100**
Contact:		**Project Name:**	Edmonds Unocal
Address:	17125 Sunset Road	**Address:**	Pine Street
	Bothell, WA 98012	**Permit Number:**	NA
Date:	2/27/03	**Time:**	9:30:00 AM

Material Data

Material Description: Sand
Layer Thickness: Unknown
Source: Import
Compaction Method: Roller/Hoe Pack

Test Device

Nuclear Gauge: CPN MC1DR MD0069642
Test Methods: Soil ASTM D2922, ASTM D3017
☑ DirectTransmission ☐ Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

Density Count: 33077 Moisture Count: 8299

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	Backfill Pit #263/-4'	119.8	10.5	108.4	112.4	96%
2	Backfill Pit #263/-3'	122.7	10.9	110.6	112.4	98%
3	Backfill Pit #263/-1'	118.2	9.4	108	112.4	96%
4	Backfill Pit #263/-1'	119	9.5	108.6	112.4	97%
5	Backfill Pit #2604/-2'	118.1	10.2	107.2	112.4	95%

Compaction Requirements: 90 % ☑ Conformance ☐ Non Conformance

Remarks/Specifications
90% compaction specification @ -4'
95% compaction specification @ Grade
Optimum moisture @ 7.6%

☑ Distribute Client
☐ Distribute Engineer
☐ Distribute Municipality
☐ Distribute Contractor
☐ Distribute Architect
☐ Distribute Other 1
☐ Distribute Other 2
☐ Distribute Other 3

Reviewed By: Alan Hale
Tested By: Kent, Gena KEN 2

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3035

AAR Testing Laboratory, Inc. 7126 180th Ave. N.E. Park 180, Suite C101, Redmond, WA 98052 Phone 425.881.5812 Fax 425.881.5441

Client:	Wyser Construction	**Project Number**	03-100
Contact:		**Project Name:**	Edmonds Unocal
Address:	17125 Sunset Road	**Address:**	Pine Street
	Bothell, WA 98012	**Permit Number:**	NA
Date:	2/27/03	**Time:**	11:30:00 AM

Material Data

Material Description: Fine Sand w/Min. Agg.
Layer Thickness: 1'
Source: Rinker
Compaction Method: Roller

Test Device

Nuclear Gauge: Troxler 3430 21240
Test Methods: Soil ASTM D2922, ASTM D3017
☑ DirectTransmission ☐ Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

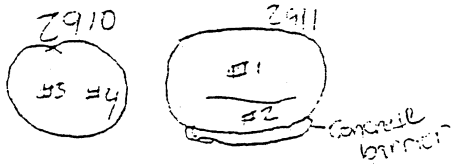
Standard Count

Density Count: 2267 Moisture Count: 644

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	2911/-5' See sketch below for locations	113.8	10	103.5	112.4	92%
2	2911/Against Concrete barrier	111.4	10.9	105	112.4	93%
3	2910/2nd lift	116.4	10.9	105	112.4	93%
4	2910/2nd lift	115.8	10.7	104.6	112.4	93%

Compaction Requirements: 90 % ☑ Conformance ☐ Non Conformance

Remarks/Specifications
Optimum moisture @ 7.6%



☑ Distribute Client
☐ Distribute Engineer
☐ Distribute Municipality
☐ Distribute Contractor
☐ Distribute Architect
☐ Distribute Other 1
☐ Distribute Other 2
☐ Distribute Other 3

Reviewed By: Alan Hale
Tested By: Tara Randolph Pfaf

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 5000

AAR Testing Laboratory, Inc. 7126 180th Ave. N.E. Park 180, Suite C101, Redmond, WA 98052 Phone 425.881.5812 Fax 425.881.5441

Client:	Wyser Construction	**Project Number**	**03-100**
Contact:		**Project Name:**	Edmonds Unocal
Address:	17125 Sunset Road	**Address:**	Pine Street
	Bothell, WA 98012	**Permit Number:**	NA
Date:	2/27/03	**Time:**	12:40:00 PM

Material Data

Material Description: Fine Sand w/Min. Agg.
Layer Thickness: 1'
Source: Rinker
Compaction Method: Roller

Test Device

Nuclear Gauge: Troxler 3430 21240
Test Methods: Soil ASTM D2922, ASTM D3017
☑ DirectTransmission ☐ Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

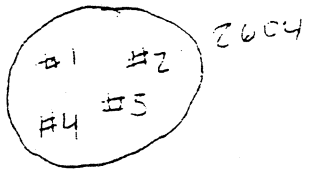
Standard Count

Density Count: 2267 Moisture Count: 644

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	2604/-5'	114.8	9.9	104.4	112.4	93%
2	↓	115.4	9.8	105.1	112.4	94%
3		113.7	9.6	103.7	112.4	92%
4	2604/-2'	115.9	9.1	106.2	112.4	94%

Compaction Requirements: 90 % ☑ Conformance ☐ Non Conformance

Remarks/Specifications
Optimum moisture @ 7.6%.
Specification requirement is 90% and 95% for -2'



☑ Distribute Client
☐ Distribute Engineer
☐ Distribute Municipality
☐ Distribute Contractor
☐ Distribute Architect
☐ Distribute Other 1
☐ Distribute Other 2
☐ Distribute Other 3

Reviewed By: Alan Hale
Tested By: Tara Randolph Pfaf

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3034

A-A-R Testing Laboratory, Inc. 7126 180th Ave. N.E. Park 180, Suite C101, Redmond, WA 98052 Phone 425.881.5812 Fax 425.881.5441

Client:	Wyser Construction	**Project Number**	**03-100**
Contact:		**Project Name:**	Edmonds Unocal
Address:	17125 Sunset Road	**Address:**	Pine Street
	Bothell, WA 98012	**Permit Number:**	NA
Date:	2/27/03	**Time:**	2:30:00 PM

Material Data

Material Description: Sand w/Min.Agg.
Layer Thickness: 1'
Source: Rinker
Compaction Method: Roller

Test Device

Nuclear Gauge: Troxler 3430 21240
Test Methods: Soil ASTM D2922, ASTM D3017
☑ DirectTransmission ☐ Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

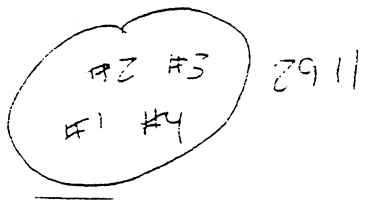
Standard Count

Density Count: 2267 Moisture Count: 644

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	2911/-4'	115.6	12.6	102.7	112.4	91%
2	↓	119.3	9.5	109	112.4	97%
3		114.4	12.2	102	112.4	91%
4		113.5	11.9	101.4	112.4	90%

Compaction Requirements: 90 % ☑ Conformance ☐ Non Conformance

Remarks/Specifications
Optimum moisture @ 7.6%



☑ Distribute Client
☐ Distribute Engineer
☐ Distribute Municipality
☐ Distribute Contractor
☐ Distribute Architect
☐ Distribute Other 1
☐ Distribute Other 2
☐ Distribute Other 3

Reviewed By: Alan Hale
Tested By: Tara Randolph Pfaf

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 4962

A-A-R Testing Laboratory, Inc. 7126 180th Ave. N.E. Park 180 Suite C101, Redmond, WA 98052 Phone: 425.881.5812 Fax: 425.881.5441

Client:	Wyser Construction	**Project Number**	03-100
Contact:		**Project Name:**	Edmonds Unocal
Address:	17125 Sunset Road	**Address:**	Pine Street
	Bothell, WA 98012	**Permit Number:**	NA
Date:	2/28/03	**Time:**	10:00:00 AM

Material Data

Material Description: Fine Silty Sand w/ Agg
Layer Thickness: Unknown
Source: Import/Rinker
Compaction Method: Roller

Test Device

Nuclear Gauge: Troxler 3430 28462
Test Methods: Soil ASTM D2922, ASTM D3017
☑ DirectTransmission ☐ Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

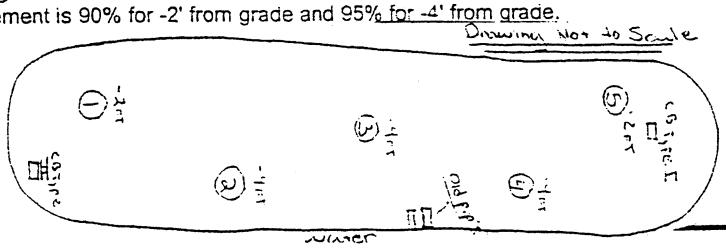
Standard Count

Density Count: 2659 Moisture Count: 635

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	Trench pit back fill for Pit #2604/-2' See sketch below for locations	119.9	11.1	107.9	112.4	96%
2	-4'	117.3	12.3	104.4	112.4	93%
3	-4'	115.7	11.4	103.8	112.4	92%
4	-4'	114.2	11	102.9	112.4	92%
5	-2'	118.6	10.7	107.1	112.4	95%

Compaction Requirements: 90 % ☑ Conformance ☐ Non Conformance

Remarks/Specifications
Optimum moisture @ 7.4%
Specification requirement is 90% for -2' from grade and 95% for -4' from grade.



☑ Distribute Client
☐ Distribute Engineer
☐ Distribute Municipality
☐ Distribute Contractor
☐ Distribute Architect
☐ Distribute Other 1
☐ Distribute Other 2
☐ Distribute Other 3

Reviewed By: Alan Hale
Tested By: Norgar, Jason NO

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 4963

A-A-R Testing Laboratory, Inc. 7126 180th Ave. N.E., Park 180, Suite C-101, Redmond, WA 98052 Phone 425.881.5812 Fax 425.881.5441

Client:	Wyser Construction	**Project Number**	03-100
Contact:		**Project Name:**	Edmonds Unocal
Address:	17125 Sunset Road	**Address:**	Pine Street
	Bothell, WA 98012	**Permit Number:**	NA
Date:	2/28/03	**Time:**	10:40:00 AM

Material Data

Material Description: Fine Silty Sand w/Min.
Layer Thickness: Unknown
Source: Import/Rinker
Compaction Method: Roller

Test Device

Nuclear Gauge: Troxler 3430 28462
Test Methods: Soil ASTM D2922, ASTM D3017
☑ DirectTransmission ☐ Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

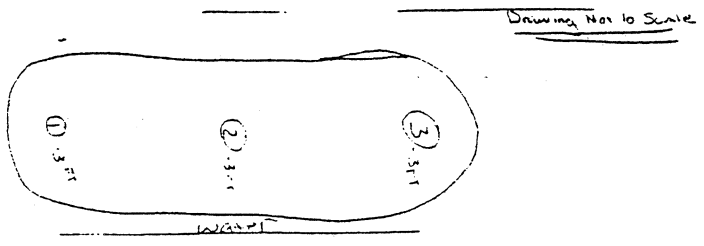
Standard Count

Density Count: 2659 Moisture Count: 635

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	Trench pit back fill for Pit #2910/-3' See sketch below for locations	110.1	9.5	100.5	112.4	89%
2	↓	112.6	11.4	101.1	112.4	90%
3		111.6	10.9	100.6	112.4	90%

Compaction Requirements: 90 % ☑ Conformance ☐ Non Conformance

Remarks/Specifications
Optimum moisture @ 7.4%



☑ Distribute Client
☐ Distribute Engineer
☐ Distribute Municipality
☐ Distribute Contractor
☐ Distribute Architect
☐ Distribute Other 1
☐ Distribute Other 2
☐ Distribute Other 3

Reviewed By: Alan Hale
Tested By: Norgar, Jason NO

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3039

A.A.R Testing Laboratory, Inc. 7126 180th Ave. N.E., Park 180, Suite C101, Redmond, WA. 98052 Phone 425.881.5812 Fax 425.881.5441

Client:	Wyser Construction	**Project Number**	**03-100**
Contact:		**Project Name:**	Edmonds Unocal
Address:	17125 Sunset Road	**Address:**	Pine Street
	Bothell, WA 98012	**Permit Number:**	NA
Date:	2/28/03	**Time:**	11:20:00 AM

Material Data

Material Description: Fine Silty Sand w/Agg.
Layer Thickness: Unknown
Source: Import/Rinker
Compaction Method: Roller

Test Device

Nuclear Gauge: Troxler 3430 28462
Test Methods: Soil ASTM D2922, ASTM D3017
☑ DirectTransmission ☐ Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

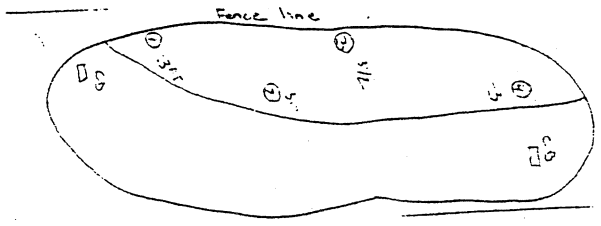
Standard Count

Density Count: 2659 Moisture Count: 635

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	Trench pit back fill for Pit #263/-3' See sketch below for locations	113.7	9.6	103.7	112.4	92%
2	-3'	112.7	10	102.5	112.4	91%
3	-3 1/2'	115.8	9.8	105.5	112.4	94%
4	-3'	114.6	9.9	104.3	112.4	93%

Compaction Requirements: 90 % ☑ Conformance ☐ Non Conformance

Remarks/Specifications
Optimum moisture @ 7.4%



☑ Distribute Client
☐ Distribute Engineer
☐ Distribute Municipality
☐ Distribute Contractor
☐ Distribute Architect
☐ Distribute Other 1
☐ Distribute Other 2
☐ Distribute Other 3

Reviewed By: Alan Hale
Tested By: Norgar, Jason NC

Test results indicate the density of the material at the above indicated locations. at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3096

A-A-R Testing Laboratory, Inc. 7126 180th Ave. N.E. Park 180, Suite C101 Redmond, WA 98052 Phone 425.881.5812 Fax 425.881.5441

Client:	Wyser Construction	**Project Number**	**03-100**
Contact:		**Project Name:**	Edmonds Unocal
Address:	17125 Sunset Road	**Address:**	Pine Street
	Bothell, WA 98012	**Permit Number:**	NA
Date:	3/5/03	**Time:**	10:00:00 AM

Material Data

Material Description: Fine Sand w/Min. Agg.
Layer Thickness: 1'
Source: Rinker
Compaction Method: Roller

Test Device

Nuclear Gauge: Troxler 3430 019274
Test Methods: Soil ASTM D2922, ASTM D3017
☑ DirectTransmission ☐ Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

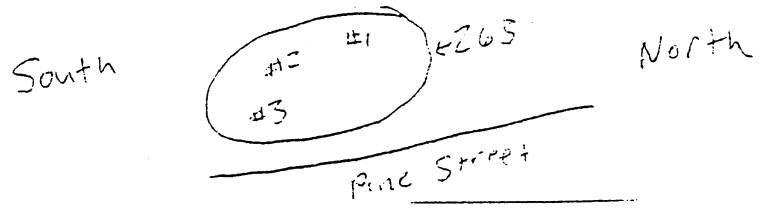
Standard Count

Density Count: 2289 Moisture Count: 654

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	263 South end/-1' See sketch below for locations	119.2	8.4	110	112.4	98%
2	↓	118.1	7.9	109.5	112.4	97%
3		120.2	8.3	110.9	112.4	99%

Compaction Requirements: 95 % ☑ Conformance ☐ Non Conformance

Remarks/Specifications



☑ Distribute Client
☐ Distribute Engineer
☐ Distribute Municipality
☐ Distribute Contractor
☐ Distribute Architect
☐ Distribute Other 1
☐ Distribute Other 2
☐ Distribute Other 3

Reviewed By: Alan Hale
Tested By: Tara Randolph Pfaf

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3097

AAR Testing Laboratory Inc. 7126 180th Ave. N.E. Park 180, Suite C101, Redmond, WA 98052 Phone 425.881.5812 Fax 425.881.5441

Client:	Wyser Construction	**Project Number**	03-100
Contact:		**Project Name:**	Edmonds Unocal
Address:	17125 Sunset Road	**Address:**	Pine Street
	Bothell, WA 98012	**Permit Number:**	NA
Date:	3/5/03	**Time:**	11:15:00 AM

Material Data

Material Description: Sand w/Min. Agg.
Layer Thickness: 1'
Source: Rinker
Compaction Method: Roller

Test Device

Nuclear Gauge: Troxler 3430 019274
Test Methods: Soil ASTM D2922, ASTM D3017
☑ DirectTransmission ☐ Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

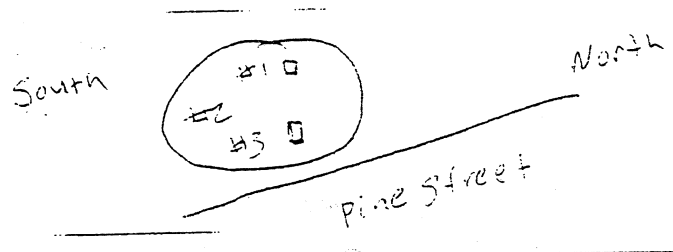
Standard Count

Density Count: 2289 Moisture Count: 654

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	263 South end, last lift See sketch below for locations	119.2	9.2	109.1	112.4	97%
2	↓	116.3	9.1	106.5	112.4	95%
3		113.9	6.8	106.6	112.4	95%

Compaction Requirements: 95 % ☑ Conformance ☐ Non Conformance

Remarks/Specifications



☑ Distribute Client
☐ Distribute Engineer
☐ Distribute Municipality
☐ Distribute Contractor
☐ Distribute Architect
☐ Distribute Other 1
☐ Distribute Other 2
☐ Distribute Other 3

Reviewed By: Alan Haie
Tested By: Tara Randolph Pfaf

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3087

A-A-R Testing Laboratory, Inc. 7126 180th Ave. N.E. Park 180 Suite C101 Redmond, WA 98052 Phone 425.881.5812 Fax 425.881.5441

Client:	Wyser Construction	**Project Number**	03-100
Contact:		**Project Name:**	Edmonds Unocal
Address:	17125 Sunset Road	**Address:**	Pine Street
	Bothell, WA 98012	**Permit Number:**	NA
Date:	3/31/03	**Time:**	8:45:00 AM

Material Data

Material Description: Sand with minimal agg
Layer Thickness: Unknown
Source: Rinker
Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 019274
Test Methods: Soil ASTM D2922, ASTM D3017
☑ DirectTransmission ☐ Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

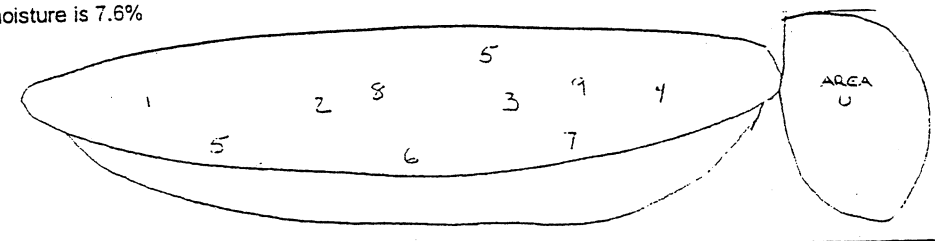
Standard Count

Density Count: 2259 Moisture Count: 648

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
6	-3' 2nd Lift	117	9.5	106.8	112.4	95%
7	-3'	118.8	12	106.1	112.4	94%
8	-3 1/2'	115.5	10.1	104.8	112.4	93%
9	-3 1/2'	117.6	9.6	107.3	112.4	95%

Compaction Requirements: 92 % ☑ Conformance ☐ Non Conformance

Remarks/Specifications
Optimum moisture is 7.6%



☑ Distribute Client
☐ Distribute Engineer
☐ Distribute Municipality
☐ Distribute Contractor
☐ Distribute Architect
☐ Distribute Other 1
☐ Distribute Other 2
☐ Distribute Other 3

Reviewed By: Haie, Alan
Tested By: Norgar, Jason NO

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

UP-02-916 1.07

Field Density Report - Nuclear Method

Report Number 3087

AAR Testing Laboratory, Inc. 4126 180th Ave. N.E. Park 180, Suite C101, Redmond, WA 98052 Phone 425.881.5812 Fax 425.881.5441

Client:	Wyser Construction	Project Number	03-100
Contact:		Project Name:	Edmonds Unocal
Address:	17125 Sunset Road Bothell, WA 98012	Address:	Pine Street
		Permit Number:	NA
Date:	3/31/03	Time:	8:45:00 AM

Material Data

Material Description: Sand with minimal agg
Layer Thickness: Unknown
Source: Rinker
Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 019274
Test Methods: Soil ASTM D2922, ASTM D3017
☑ DirectTransmission ☐ Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

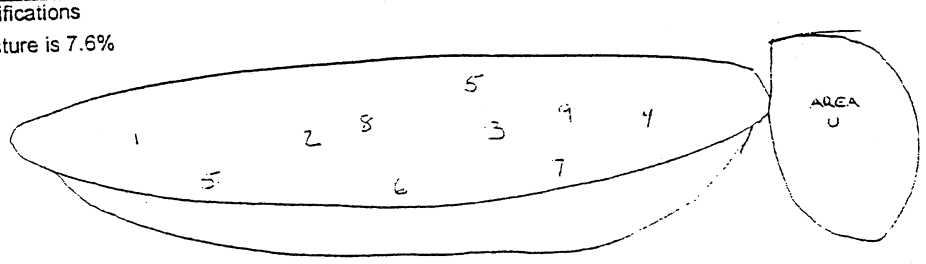
Standard Count

Density Count: 2259 Moisture Count: 648

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	Pit #2912 See Sketch -4'	111.8	7.8	103.7	112.4	92%
2	-4'	113	9	103.6	112.4	92%
3	-4 1/2'	113.9	7.8	105.7	112.4	94%
4	-4'	115.8	9.2	106	112.4	94%
5	-4 1/2'	109.1	6	102.9	112.4	92%

Compaction Requirements: 92 % ☑ Conformance ☐ Non Conformance

Remarks/Specifications
Optimum moisture is 7.6%



☑ Distribute Client
☐ Distribute Engineer
☐ Distribute Municipality
☐ Distribute Contractor
☐ Distribute Architect
☐ Distribute Other 1
☐ Distribute Other 2
☐ Distribute Other 3

Reviewed By: Hale, Alan
Tested By: Norgar, Jason NO

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3003

AAR Testing Laboratory, Inc. 7126 180th Ave. N.E., Park 180, Suite C101, Redmond, WA 98052 Phone 425.881.5812 Fax 425.881.5441

Client:	Wyser Construction	**Project Number**	**03-100**
Contact:		**Project Name:**	Edmonds Unocal
Address:	17125 Sunset Road Bothell, WA 98012	**Address:**	Pine Street
		Permit Number:	NA
Date:	4/1/03	**Time:**	2:30:00 PM

Material Data

Material Description: Sand with aggregate
Layer Thickness: Unknown
Source: Rinker
Compaction Method: Vibratory Roller

Test Device

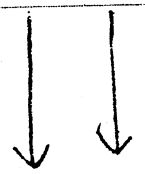
Nuclear Gauge: Troxler 3430 21240
Test Methods: Soil ASTM D2922, ASTM D3017
☑ DirectTransmission ☐ Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

Density Count: 2276 Moisture Count: 654

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
6		130.2	11.6	116.7	116.8	100%
7		120.9	10.5	109.4	116.8	94%
8		127.6	11	114.9	116.8	98%

Compaction Requirements: 90 % ☑ Conformance ☐ Non Conformance

Remarks/Specifications

Observed some oversize aggregate in the sand and believe it's the cause of 100+ compaction. Obtained a sample to have an aggregate correction factor ran. Sample was obtained from underneath the gauge from test #8. The results on this report is with the aggregate correction applied.

☑ Distribute Client
☐ Distribute Engineer
☐ Distribute Municipality
☐ Distribute Contractor
☐ Distribute Architect
☐ Distribute Other 1
☐ Distribute Other 2
☐ Distribute Other 3

Reviewed By: Hale, Alan
Tested By: Randolph, Tara

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3003

A.A.R Testing Laboratory, Inc. 7126 180th Ave. N.E. Park 180 Suite C101, Redmond, WA 98052 Phone 425.881.5812 Fax 425.881.5441

Client:	Wyser Construction	**Project Number**	03-100
Contact:		**Project Name:**	Edmonds Unocal
Address:	17125 Sunset Road Bothell, WA 98012	**Address:**	Pine Street
		Permit Number:	NA
Date:	4/1/03	**Time:**	2:30:00 PM

Material Data

Material Description: Sand with aggregate
Layer Thickness: Unknown
Source: Rinker
Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 21240
Test Methods: Soil ASTM D2922, ASTM D3017
☑ DirectTransmission ☐ Back Scatter

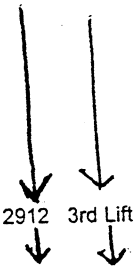
Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

Density Count: 2276 Moisture Count: 654

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	Test Hole 2912 2nd Lift	126.1	10.5	114.1	116.8	98%
2		128	11.2	115.1	116.8	99%
3		118	9.9	107.4	116.8	92%
4		126.9	10.3	115	116.8	98%
5	Test Hole 2912 3rd Lift	125.3	10.8	113.1	116.8	97%



Compaction Requirements: 90 % ☑ Conformance ☐ Non Conformance

Remarks/Specifications

Observed some oversize aggregate in the sand and believe it's the cause of 100+ compaction. Obtained a sample to have an aggregate correction factor ran. Sample was obtained from underneath the gauge from test #8. The results on this report is with the aggregate correction applied.

☑ Distribute Client
☐ Distribute Engineer
☐ Distribute Municipality
☐ Distribute Contractor
☐ Distribute Architect
☐ Distribute Other 1
☐ Distribute Other 2
☐ Distribute Other 3

Reviewed By: Hale, Alan
Tested By: Randolph, Tara

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 4185

A.A.R Testing Laboratory, Inc. 7126 180th Ave. N.E. Park 180, Suite C101, Redmond, WA 98052 Phone 425.881.5812 Fax 425.881.5441

Client:	Wyser Construction	**Project Number**	03-100
Contact:		**Project Name:**	Edmonds Unocal
Address:	17125 Sunset Road Bothell, WA 98012	**Address:**	Pine Street
		Permit Number:	NA
Date:	4/1/03	**Time:**	2:30:00 PM

Material Data

Material Description: Sand with minimal Ag
Layer Thickness: Unknown
Source: Rinker
Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 21240
Test Methods: Soil ASTM D2922, ASTM D3017
☑ DirectTransmission ☐ Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

Density Count: 2276 Moisture Count: 654

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	Test Hole 4120, 1st lift	113.9	7.3	106.1	112.4	94%
2	↓	116.3	7.9	107.8	112.4	96%

Compaction Requirements: 90 % ☑ Conformance ☐ Non Conformance

Remarks/Specifications

☑ Distribute Client
☐ Distribute Engineer
☐ Distribute Municipality
☐ Distribute Contractor
☐ Distribute Architect
☐ Distribute Other 1
☐ Distribute Other 2
☐ Distribute Other 3

Reviewed By: Hale, Alan
Tested By: Randolph, Tara

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3089

A-A-R Testing Laboratory, Inc. 7126 180th Ave. N.E. Park 180 Suite C101 Redmond, WA 98052 Phone 425.881.5810 Fax 425.881.5441

Client:	Wyser Construction	**Project Number**	03-100
Contact:		**Project Name:**	Edmonds Unocal
Address:	17125 Sunset Road	**Address:**	Pine Street
	Bothell, WA 98012	**Permit Number:**	NA
Date:	4/2/03	**Time:**	11:40:00 AM

Material Data

Material Description: Sand with minimal agg
Layer Thickness: Unknown
Source: Rinker
Compaction Method: 95

Test Device

Nuclear Gauge: Troxler 3430 019274
Test Methods: Soil ASTM D2922, ASTM D3017
☑ DirectTransmission ☐ Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

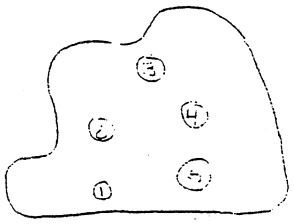
Standard Count

Density Count: 2262 Moisture Count: 646

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	Final Lift for Test pit #4120	117	8.1	108.2	112.4	96%
2		116.2	9.2	106.4	112.4	95%
3		116.7	9.4	106.7	112.4	95%
4		114.6	7.6	106.5	112.4	95%
5		114.8	6.9	107.4	112.4	96%

Compaction Requirements: 95 % ☑ Conformance ☐ Non Conformance

Remarks/Specifications
Optimum Moisture is 7.6%



Drawing Not to Scale

☑ Distribute Client
☐ Distribute Engineer
☐ Distribute Municipality
☐ Distribute Contractor
☐ Distribute Architect
☐ Distribute Other 1
☐ Distribute Other 2
☐ Distribute Other 3

Reviewed By: Hale, Alan
Tested By: Norgar, Jason NO

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

COMPACTION TEST REPORT

Curve No.: 101

Project No.: 03-100 **Date:** 4/2/03

Project: Unical Edmonds

Location:

Elev./Depth: **Sample No.** 1

Remarks: tested/calculated by m.holtz
reviewed by a. hale

MATERIAL DESCRIPTION

Description: import drk med sand w/ 1 1/2" agg

Classifications - **USCS:** **AASHTO:**

Nat. Moist. =

Liquid Limit =

% > No.4 = 11.8 %

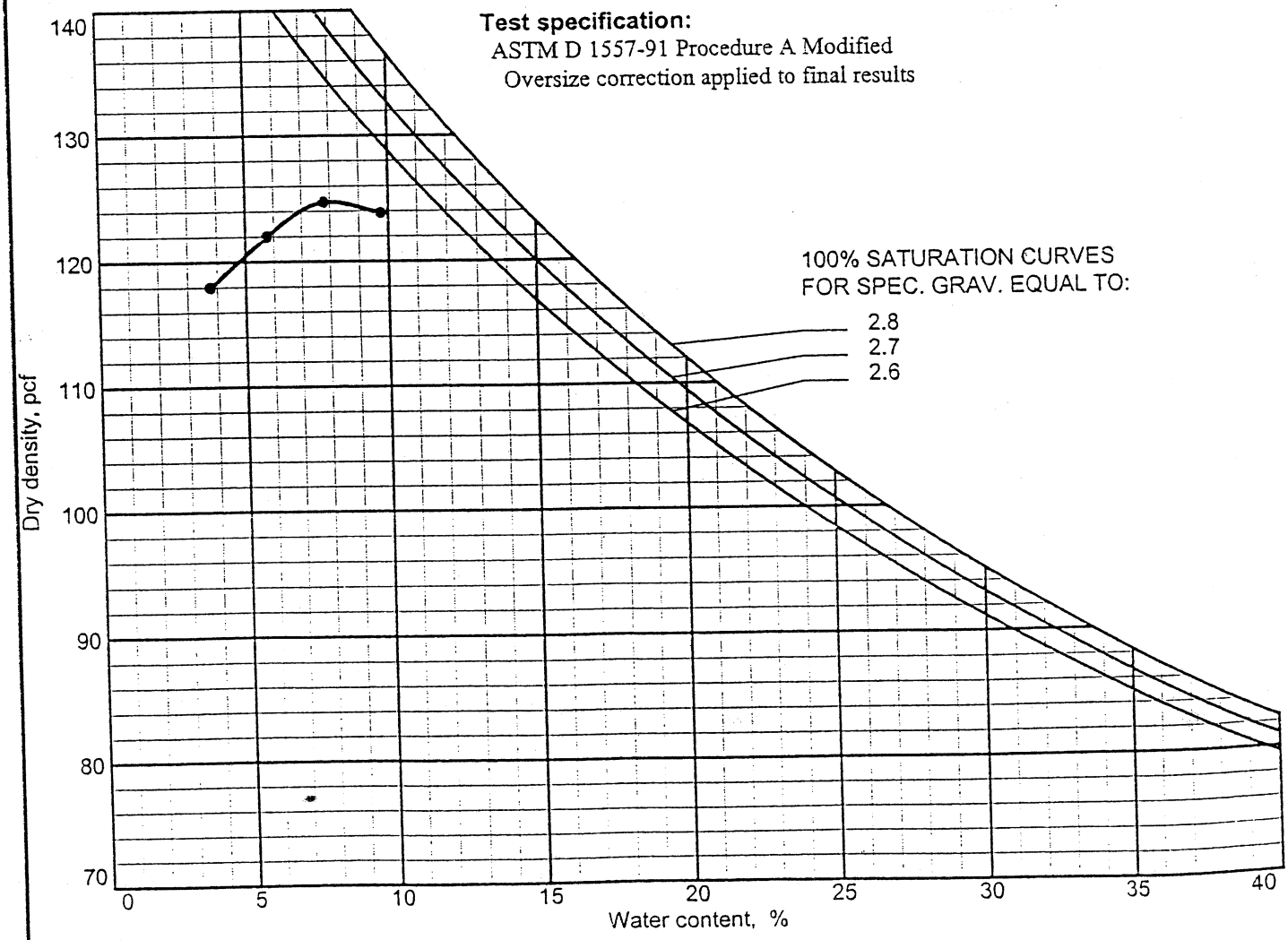
Sp.G. = 2.64

Plasticity Index =

% < No.200 = 0.0 %

TEST RESULTS
Maximum dry density = 128.4 pcf
Optimum moisture = 7.1 %

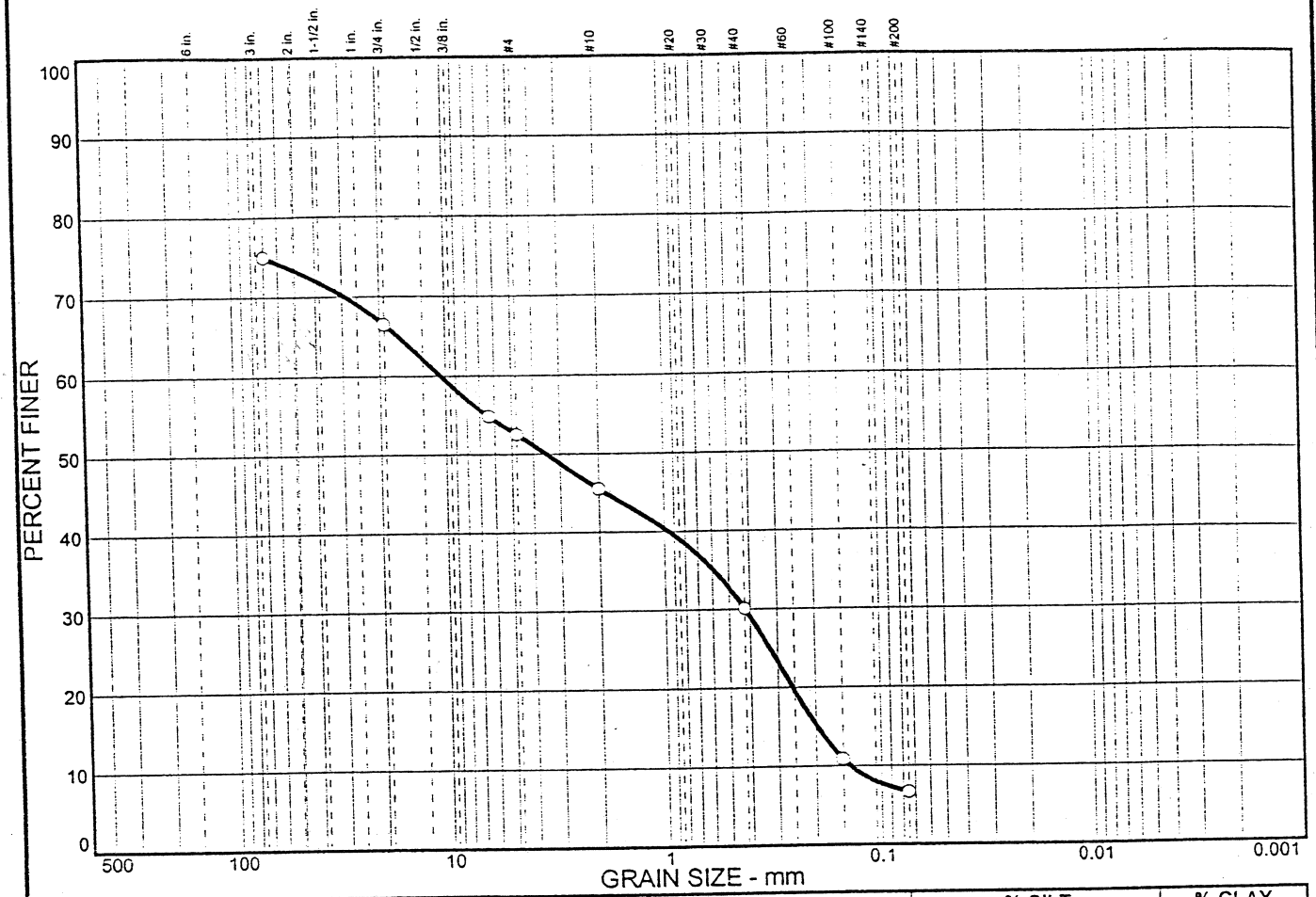
Test specification:
ASTM D 1557-91 Procedure A Modified
Oversize correction applied to final results



Plate

A.A.R. Testing Laboratory, Inc.

Particle Size Distribution Report



% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY
		45.8	6.7	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1 1/4 in.	75.0		
3/4 in.	66.5		
1/4 in.	54.8		
#4	52.5		
#10	45.5		
#40	30.1		
#100	10.9		
#200	6.7		

* (no specification provided)

Soil Description

import drk med sand w/ 1 1/2" agg

j03

Atterberg Limits

PL= LL= PI=

Coefficients

D_{85}= D_{60}= 10.5 D_{50}= 3.49

D_{30}= 0.423 D_{15}= 0.197 D_{10}= 0.138

C_u= 76.01 C_c= 0.12

Classification

USCS= AASHTO=

Remarks

tested/calculated by m.holtz

reviewed by a. hale

Sample No.: 1 Source of Sample: native bremerton site Date: 4/7/03

Location: Elev./Depth:

A.A.R. Testing Laboratory, Inc.

Client: Wyser Construction

Project: Unical Edmonds

Project No: 03-100 Plate

COMPACTION TEST REPORT

Curve No.: 104

Date: 4/8/03

Project No.: 03-100

Project: Unical Edmonds

Location:

Elev./Depth:

Sample No. 1

Remarks: tested/calculated by m.holtz
reviewed by a. hale

MATERIAL DESCRIPTION

Description: fine silty sand w/ minimal agg

Classifications - **USCS:** **AASHTO:**

Nat. Moist. =

Liquid Limit =

Sp.G. = 2.64

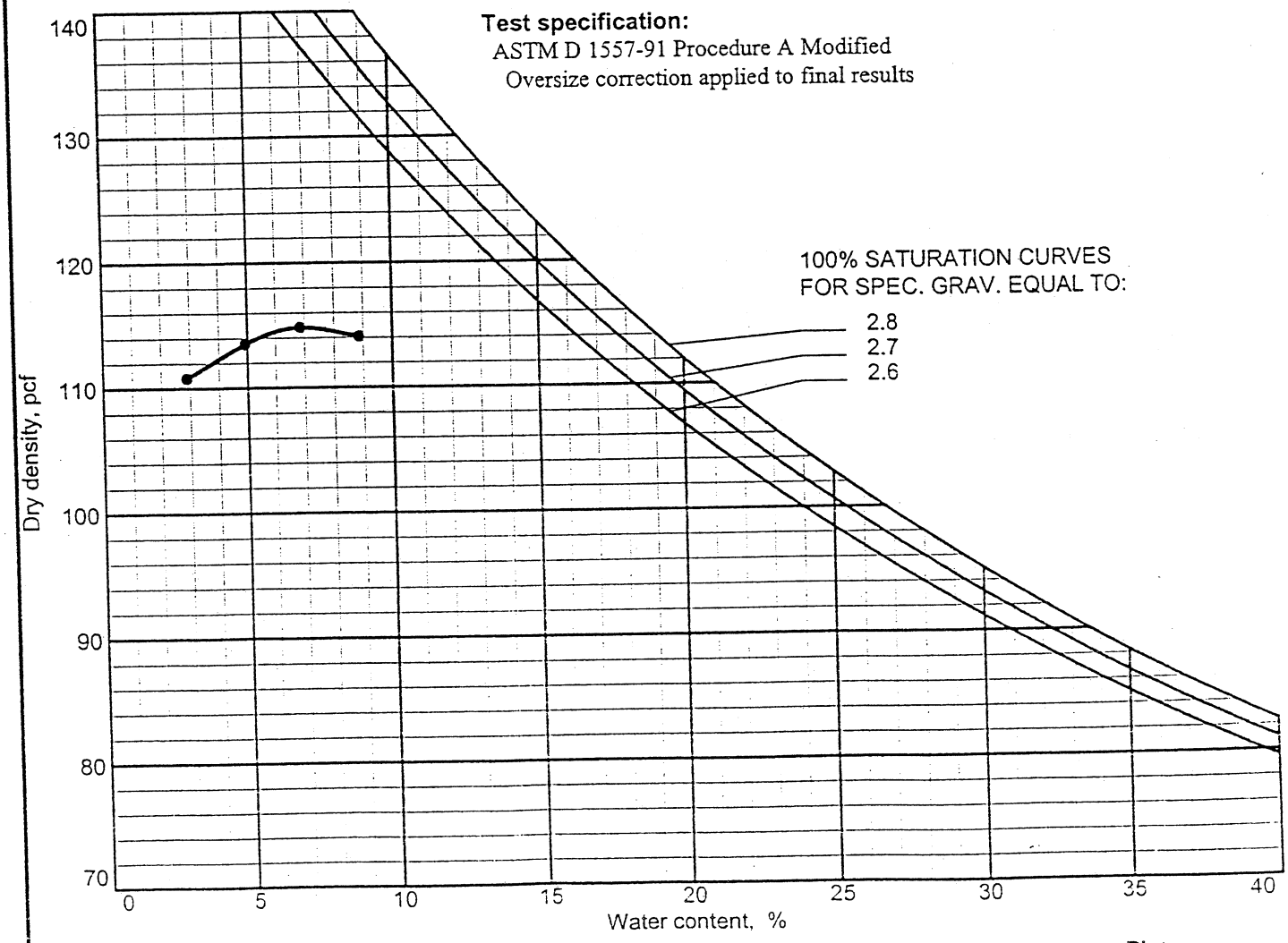
Plasticity Index =

% > No.4 = 5.5 %

% < No.200 = 0.0 %

TEST RESULTS
Maximum dry density = 116.8 pcf
Optimum moisture = 6.5 %

Test specification:
ASTM D 1557-91 Procedure A Modified
Oversize correction applied to final results



Plate

Field Report

Report Number: 34644

[redacted] Suite C-101, Redmond, WA
[redacted]

Client: Wyser Construction
17125 Sunset Road
Bothell, WA 98012

Contact:

Project Number: 03-100
Permit #: NA
Project Name: Edmonds Unocal
Address: Pine Street

Date: 4/8/03 **Time:** 9:00:00 AM **Temperature:**

On site for compaction for pit #218. Due to high moisture from rain, the edges and lower section is pumping. Contractor removed saturated material, put down filter fabric and 2"-4" rock, then put dryer material in. Will be ready for compaction testing tomorrow.

Distribution:
- [x] Distribute Client
- [ ] Distribute Engineer
- [ ] Distribute Municipality
- [ ] Distribute Architect
- [ ] Distribute Contractor
- [ ] Distribute Owner
- [ ] Distribute Other
- [ ] Distribute Other

Inspector: Norgar, Jason NOR 06 5854
Reviewed by: Kim Anderson

Field Density Report - Nuclear Method

Report Number 3118a

A-A-R Testing Laboratory, Inc. 7126 180th Ave. N.E. Park 180, Suite C101, Redmond, WA 98052 Phone 425.881.5812 Fax 425.881.5441

Client:	Wyser Construction	**Project Number**	03-100
Contact:		**Project Name:**	Edmonds Unocal
Address:	17125 Sunset Road	**Address:**	Pine Street
	Bothell, WA 98012	**Permit Number:**	NA
Date:	4/8/03	**Time:**	9:30:00 AM

Material Data

Material Description: Sand with minimal agg
Layer Thickness: Unknown
Source: Rinker
Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 28462
Test Methods: Soil ASTM D2922, ASTM D3017
☑ DirectTransmission ☐ Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

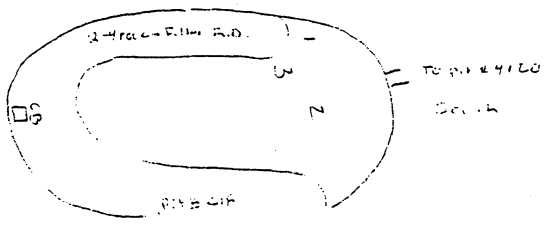
Standard Count

Density Count: 2661 Moisture Count: 619

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	Final Lift for Pit #218	120.3	13.1	106.4	112.4	95%
2	↓	121.4	13	107.4	112.4	96%
3		119.9	12.7	106.4	112.4	95%

Compaction Requirements: 95 % ☑ Conformance ☐ Non Conformance

Remarks/Specifications
Optimum moisture is 7.6%
See Sand report # 34644
Drawing Not to Scale.



☑ Distribute Client
☐ Distribute Engineer
☐ Distribute Municipality
☐ Distribute Contractor
☐ Distribute Architect
☐ Distribute Other 1
☐ Distribute Other 2
☐ Distribute Other 3

Reviewed By: Hale, Alan
Tested By: Norgar, Jason NO

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Report

Report Number: 34612

A.A.R. Testing Laboratory, Inc. [illegible] Suite C101, Redmond, WA 98052 Phone 425-88[illegible] Fax 425-881-5441

Client: **Wyser Construction**
17125 Sunset Road
Bothell, WA 98012

Contact:

Project Number: 03-100

Permit #: NA

Project Name: Edmonds Unocal

Address: Pine Street

Date: 4/9/03 **Time:** **Temperature:**

On site for compaction for pit #218. Due to high moisture around the edge of the pit, where water had no where to drain, Contractor removed saturated material by digging out a trench approximately 6' width and 4' in depth. Filter fabric was placed with 2" to 4" rock for drainage. Due to overnight rain, moisture readings were high, ranging from 10% to 13%. However, material appeared firm and unyielding after rolling. Please refer to report #3071, for compaction results.

Distribution:

- [x] Distribute Client
- [ ] Distribute Engineer
- [ ] Distribute Municipality
- [ ] Distribute Architect
- [ ] Distribute Contractor
- [ ] Distribute Owner
- [ ] Distribute Other
- [ ] Distribute Other

Inspector: Norgar, Jason NOR 06 5854

Reviewed by: Kim Anderson

Field Density Report - Nuclear Method

Report Number 3072

A A R Testing Laboratory, Inc. 7126 180th Ave. N.E. Park 180, Suite C101, Redmond, WA 98052 Phone 425.881.5812 Fax 425.881.5441

Client:	Wyser Construction	**Project Number**	**03-100**
Contact:		**Project Name:**	Edmonds Unocal
Address:	17125 Sunset Road Bothell, WA 98012	**Address:**	Pine Street
		Permit Number:	NA
Date:	4/9/03	**Time:**	9:00:00 AM

Material Data

Material Description: Sand with 2'-4' aggreg
Layer Thickness: Unknown
Source: Rinker
Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 019274
Test Methods: Soil ASTM D2922, ASTM D3017
☑ DirectTransmission ☐ Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

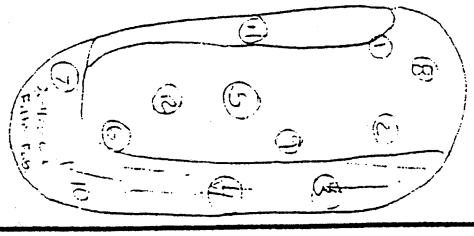
Density Count: 2720 Moisture Count: 644

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
11		123.7	11.6	110.8	116.6	95%
12	↓	123.8	10.7	111.8	116.6	96%

Compaction Requirements: 92 % ☑ Conformance ☐ Non Conformance

Remarks/Specifications

Optimum moisture is 6.4%. Drawing not to scale. Tests #9 through #12 have a 95% compaction requirement.



☑ Distribute Client
☐ Distribute Engineer
☐ Distribute Municipality
☐ Distribute Contractor
☐ Distribute Architect
☐ Distribute Other 1
☐ Distribute Other 2
☐ Distribute Other 3

Reviewed By: Hale, Alan
Tested By: Norgar, Jason NO

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3072

AAR Testing Laboratory, Inc. 4126 180th Ave. N.E. Park 180, Suite C10E Redmond, WA 98052 Phone 425.881.5812 Fax 425.881.5441

Client:	Wyser Construction	**Project Number**	03-100
Contact:		**Project Name:**	Edmonds Unocal
Address:	17125 Sunset Road Bothell, WA 98012	**Address:**	Pine Street
		Permit Number:	NA
Date:	4/9/03	**Time:**	9:00:00 AM

Material Data

Material Description: Sand with 2'-4' aggreg
Layer Thickness: Unknown
Source: Rinker
Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 019274
Test Methods: Soil ASTM D2922, ASTM D3017
☑ DirectTransmission ☐ Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

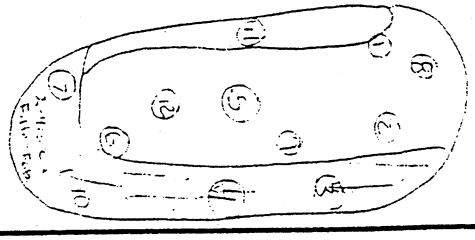
Density Count: 2720 Moisture Count: 644

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
6	Pit #218, 2nd Lift, See sketch for locations	124	11.7	111.5	116.6	96%
7		122.8	10.9	110.5	116.6	95%
8		120.7	10.8	108.7	116.6	93%
9	Pit #218, 3rd Lift, See sketch for locations	123.1	11.1	110.8	116.6	95%
10		123.2	11.7	110.2	116.6	95%

Compaction Requirements: 92 % ☑ Conformance ☐ Non Conformance

Remarks/Specifications

Optimum moisture is 6.4%. Drawing not to scale. Tests #9 through #12 have a 95% compaction requirement.



☑ Distribute Client
☐ Distribute Engineer
☐ Distribute Municipality
☐ Distribute Contractor
☐ Distribute Architect
☐ Distribute Other 1
☐ Distribute Other 2
☐ Distribute Other 3

Reviewed By: Hale, Alan
Tested By: Norgar, Jason NC

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3072

AAR Testing Laboratory, Inc. 12618 180th Ave. N.E. Park 180, Suite C101, Redmond, WA 98052 Phone 425.881.5812 Fax 425.881.5441

Client:	Wyser Construction	**Project Number**	**03-100**
Contact:		**Project Name:**	Edmonds Unocal
Address:	17125 Sunset Road Bothell, WA 98012	**Address:**	Pine Street
		Permit Number:	NA
Date:	4/9/03	**Time:**	9:00:00 AM

Material Data

Material Description: Sand with 2'-4' aggreg
Layer Thickness: Unknown
Source: Rinker
Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 019274
Test Methods: Soil ASTM D2922, ASTM D3017
☑ DirectTransmission ☐ Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

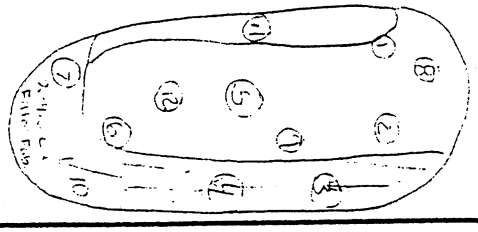
Density Count: 2720 Moisture Count: 644

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	Pit #218, 1st lift, See Sketch for locations	121.7	10.6	110.1	116.6	94%
2		120.5	13	106.6	116.6	91%
3		119.1	11.4	106.9	116.6	92%
4		123.9	11	111.6	116.6	96%
5		121.1	12.9	107.2	116.6	92%

Compaction Requirements: 92 % ☑ Conformance ☐ Non Conformance

Remarks/Specifications

Optimum moisture is 6.4%. Drawing not to scale. Tests #9 through #12 have a 95% compaction requirement.



☑ Distribute Client
☐ Distribute Engineer
☐ Distribute Municipality
☐ Distribute Contractor
☐ Distribute Architect
☐ Distribute Other 1
☐ Distribute Other 2
☐ Distribute Other 3

Reviewed By: Hale, Alan
Tested By: Norgar, Jason NO

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3095

AAR Testing Laboratory, Inc. 7126 180th Ave. N.E. Park 180, Suite C101, Redmond, WA 98052 Phone 425.881.5812 Fax 425.881.5441

Client:	Wyser Construction	**Project Number**	03-100
Contact:		**Project Name:**	Edmonds Unocal
Address:	17125 Sunset Road Bothell, WA 98012	**Address:**	Pine Street
		Permit Number:	NA
Date:	4/10/03	**Time:**	12:07:00 PM

Material Data

Material Description: Sand with minimal Ag
Layer Thickness: Unknown
Source: Rinker
Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 28462
Test Methods: Soil ASTM D2922, ASTM D3017
☑ DirectTransmission ☐ Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

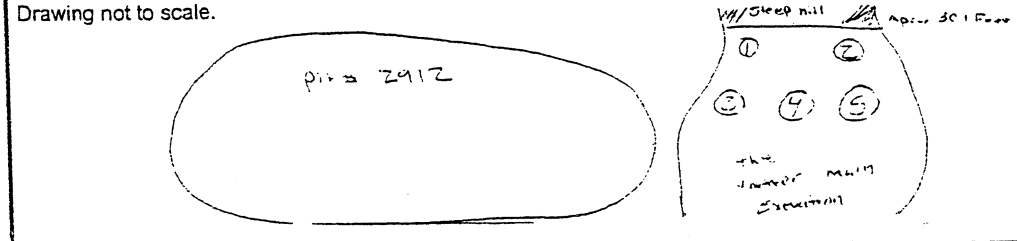
Standard Count

Density Count: 2654 Moisture Count: 636

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	Water Main Trench, Pit #U, 1st Lift	112.8	9.2	103.3	112.4	92%
2		111.4	7.7	103.4	112.4	92%
3		111.1	8.2	102.7	112.4	91%
4		112.8	8.5	104	112.4	93%
5		112.8	8.6	103.9	112.4	92%

Compaction Requirements: 92 % ☑ Conformance ☐ Non Conformance

Remarks/Specifications
Drawing not to scale.



☑ Distribute Client
☐ Distribute Engineer
☐ Distribute Municipality
☐ Distribute Contractor
☐ Distribute Architect
☐ Distribute Other 1
☐ Distribute Other 2
☐ Distribute Other 3

Reviewed By: Hale, Alan
Tested By: Norgar, Jason NC

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3117

A.A.R Testing Laboratory, Inc. 7126 180th Ave. N.E. Park 180, Suite C101, Redmond, WA 98052 Phone 425.881.5812 Fax 425.881.5411

Client:	Wyser Construction	**Project Number**	**03-100**
Contact:		**Project Name:**	Edmonds Unocal
Address:	17125 Sunset Road	**Address:**	Pine Street
	Bothell, WA 98012	**Permit Number:**	NA
Date:	4/11/03	**Time:**	7:15:00 AM

Material Data

Material Description: Sand with minimal agg
Layer Thickness: Unknown
Source: Rinker
Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 28462
Test Methods: Soil ASTM D2922, ASTM D3017
☑ DirectTransmission ☐ Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

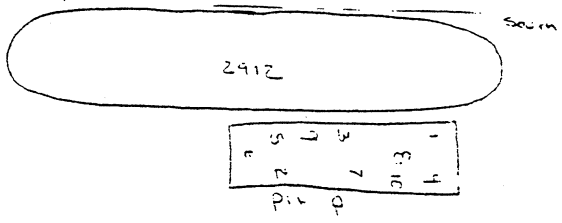
Standard Count

Density Count: 2666 Moisture Count: 622

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	Pit P 1st Lift See Sketch	116.7	10	105.1	112.4	94%
2		114.7	9	105.2	112.4	94%
3	Pit P 2nd Lift See Sketch	112.2	8.9	103.1	112.4	92%
4		113.6	9	104.2	112.4	93%
5	Pit P 3rd Lift See Sketch	111.8	8	103.5	112.4	92%

Compaction Requirements: 92 % ☑ Conformance ☐ Non Conformance

Remarks/Specifications
Tests 9 and 10 have a 95% compaction requirement. Optimum moisture is 7.6%



☑ Distribute Client
☐ Distribute Engineer
☐ Distribute Municipality
☐ Distribute Contractor
☐ Distribute Architect
☐ Distribute Other 1
☐ Distribute Other 2
☐ Distribute Other 3

Reviewed By: Hale, Alan
Tested By: Norgar, Jason NO

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3116

A.A.R. Testing Laboratory, Inc. 7126 180th Ave. N.E. Park 180, Suite C101, Redmond, WA 98052 Phone 425.881.5812 Fax 425.881.5441

Client:	Wyser Construction	**Project Number**	03-100
Contact:		**Project Name:**	Edmonds Unocal
Address:	17125 Sunset Road	**Address:**	Pine Street
	Bothell, WA 98012	**Permit Number:**	NA
Date:	4/11/03	**Time:**	9:50:00 AM

Material Data

Material Description: Sand with minimal agg
Layer Thickness: Unknown
Source: Rinker
Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 28462
Test Methods: Soil ASTM D2922, ASTM D3017
☑ DirectTransmission ☐ Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

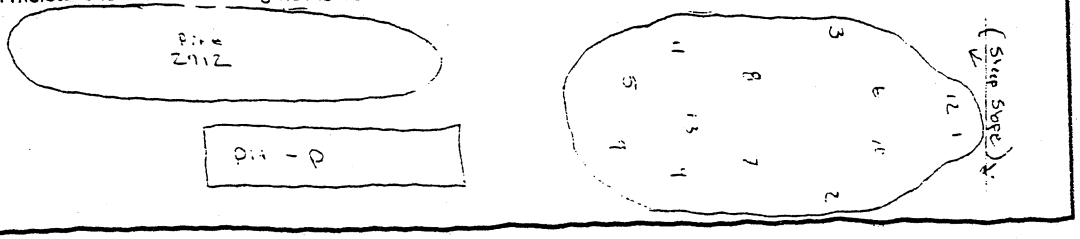
Standard Count

Density Count: 2666 Moisture Count: 622

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
11	↓	113.7	9.5	103.8	112.4	92%
12		112.7	7.9	104.4	112.4	93%
13		112.8	8	104.4	112.4	93%

Compaction Requirements: 90 % ☑ Conformance ☐ Non Conformance

Remarks/Specifications
Optimum moisture is 7.6%. Drawing not to scale.



☑ Distribute Client
☐ Distribute Engineer
☐ Distribute Municipality
☐ Distribute Contractor
☐ Distribute Architect
☐ Distribute Other 1
☐ Distribute Other 2
☐ Distribute Other 3

Reviewed By: Hale, Alan
Tested By: Norgar, Jason NO

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3116

A A R Testing Laboratory, Inc. 7126 180th Ave. N.E. Park 180, Suite C101, Redmond, WA 98052 Phone 425 881 5812 Fax 425 881 5411

Client:	Wyser Construction	**Project Number**	**03-100**
Contact:		**Project Name:**	Edmonds Unocal
Address:	17125 Sunset Road	**Address:**	Pine Street
	Bothell, WA 98012	**Permit Number:**	NA
Date:	4/11/03	**Time:**	9:50:00 AM

Material Data

Material Description: Sand with minimal agg
Layer Thickness: Unknown
Source: Rinker
Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 28462
Test Methods: Soil ASTM D2922, ASTM D3017
☑ DirectTransmission ☐ Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

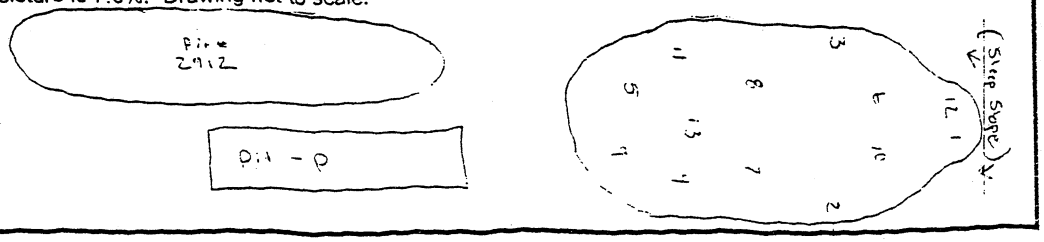
Standard Count

Density Count: 2666 Moisture Count: 622

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
6	3rd Lift	114.9	8.3	106	112.4	94%
7		114.6	8.4	105.7	112.4	94%
8		112.8	7.2	105.2	112.4	94%
9		112.5	8.1	104	112.4	93%
10	4th Lift	110.9	8	102.7	112.4	91%

Compaction Requirements: 90 % ☑ Conformance ☐ Non Conformance

Remarks/Specifications
Optimum moisture is 7.6%. Drawing not to scale.



☑ Distribute Client
☐ Distribute Engineer
☐ Distribute Municipality
☐ Distribute Contractor
☐ Distribute Architect
☐ Distribute Other 1
☐ Distribute Other 2
☐ Distribute Other 3

Reviewed By: Hale, Alan
Tested By: Norgar, Jason NC

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3116

AAR Testing Laboratory, Inc. 7126 180th Ave. N.E. Park 180 Suite C101, Redmond, WA 98052 Phone 425-881-5812 Fax 425-881-5441

Client:	Wyser Construction	**Project Number**	**03-100**
Contact:		**Project Name:**	Edmonds Unocal
Address:	17125 Sunset Road Bothell, WA 98012	**Address:**	Pine Street
		Permit Number:	NA
Date:	4/11/03	**Time:**	9:50:00 AM

Material Data

Material Description: Sand with minimal agg
Layer Thickness: Unknown
Source: Rinker
Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 28462
Test Methods: Soil ASTM D2922, ASTM D3017
☑ DirectTransmission ☐ Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

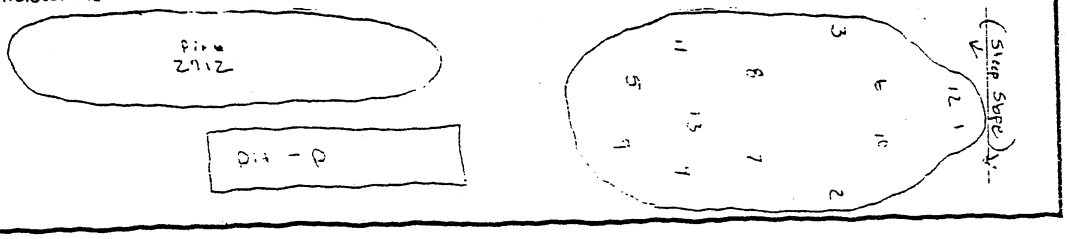
Standard Count

Density Count: 2666 Moisture Count: 622

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	2nd Lift for Water Main Pit, Area U See Sketch	112.8	9.1	103.4	112.4	92%
2		115.1	9.3	105.4	112.4	94%
3		111.8	7.7	103.8	112.4	92%
4		113.3	8	104.9	112.4	93%
5		115	8.7	105.9	112.4	94%

Compaction Requirements: 90 % ☑ Conformance ☐ Non Conformance

Remarks/Specifications
Optimum moisture is 7.6%. Drawing not to scale.



☑ Distribute Client
☐ Distribute Engineer
☐ Distribute Municipality
☐ Distribute Contractor
☐ Distribute Architect
☐ Distribute Other 1
☐ Distribute Other 2
☐ Distribute Other 3

Reviewed By: Hale, Alan
Tested By: Norgar, Jason NO

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3117

AAR Testing Laboratory, Inc. 7126 180th Ave. N.E. Park 180, Suite C101, Redmond, WA 98052 Phone 425.881.5812 Fax 425.881.5441

Client:	Wyser Construction	**Project Number**	03-100
Contact:		**Project Name:**	Edmonds Unocal
Address:	17125 Sunset Road	**Address:**	Pine Street
	Bothell, WA 98012	**Permit Number:**	NA
Date:	4/11/03	**Time:**	7:15:00 AM

Material Data

Material Description: Sand with minimal agg
Layer Thickness: Unknown
Source: Rinker
Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 28462
Test Methods: Soil ASTM D2922, ASTM D3017
☑ DirectTransmission ☐ Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

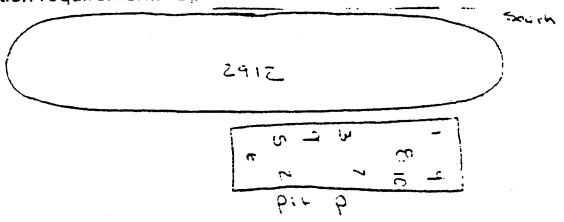
Density Count: 2666 Moisture Count: 622

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
6		112.7	7.9	104.4	112.4	93%
7	Pit P 4th Lift See Sketch	112.5	7.8	104.4	112.4	93%
8		112.8	9.3	103.2	112.4	92%
9	Pit P Final Lift See Sketch	117.5	9	107.8	112.4	96%
10		116.4	8.6	107.2	112.4	95%

Compaction Requirements: 92 % ☑ Conformance ☐ Non Conformance

Remarks/Specifications

Tests 9 and 10 have a 95% compaction requirement. Optimum moisture is 7.6%



☑ Distribute Client
☐ Distribute Engineer
☐ Distribute Municipality
☐ Distribute Contractor
☐ Distribute Architect
☐ Distribute Other 1
☐ Distribute Other 2
☐ Distribute Other 3

Reviewed By: Hale, Alan
Tested By: Norgar, Jason NO

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3117

A.A.R Testing Laboratory, Inc. 7126 180th Ave. N.E. Park 180, Suite C101, Redmond, WA 98052 Phone 425.881.5812 Fax 425.881.5441

Client:	Wyser Construction	**Project Number**	**03-100**
Contact:		**Project Name:**	Edmonds Unocal
Address:	17125 Sunset Road Bothell, WA 98012	**Address:**	Pine Street
		Permit Number:	NA
Date:	4/11/03	**Time:**	7:15:00 AM

Material Data

Material Description: Sand with minimal agg
Layer Thickness: Unknown
Source: Rinker
Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 28462
Test Methods: Soil ASTM D2922, ASTM D3017
☑ DirectTransmission ☐ Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

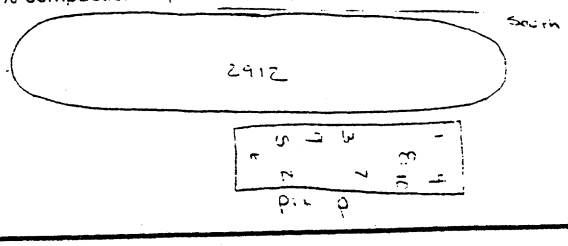
Standard Count

Density Count: 2666 Moisture Count: 622

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	Pit P 1st Lift See Sketch	116.7	10	105.1	112.4	94%
2		114.7	9	105.2	112.4	94%
3	Pit P 2nd Lift See Sketch	112.2	8.9	103.1	112.4	92%
4		113.6	9	104.2	112.4	93%
5	Pit P 3rd Lift See Sketch	111.8	8	103.5	112.4	92%

Compaction Requirements: 92 % ☑ Conformance ☐ Non Conformance

Remarks/Specifications
Tests 9 and 10 have a 95% compaction requirement. Optimum moisture is 7.6%



☑ Distribute Client
☐ Distribute Engineer
☐ Distribute Municipality
☐ Distribute Contractor
☐ Distribute Architect
☐ Distribute Other 1
☐ Distribute Other 2
☐ Distribute Other 3

Reviewed By: Hale, Alan
Tested By: Norgar, Jason NO

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3116

A A R Testing Laboratory, Inc. 7126 180th Ave. N.E. Park 180, Suite C101 Redmond, WA 98052 Phone 425.881.5812 Fax 425.881.5441

Client:	Wyser Construction	**Project Number**	03-100
Contact:		**Project Name:**	Edmonds Unocal
Address:	17125 Sunset Road	**Address:**	Pine Street
	Bothell, WA 98012	**Permit Number:**	NA
Date:	4/11/03	**Time:**	9:50:00 AM

Material Data

Material Description: Sand with minimal agg
Layer Thickness: Unknown
Source: Rinker
Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 28462
Test Methods: Soil ASTM D2922, ASTM D3017
☑ DirectTransmission ☐ Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

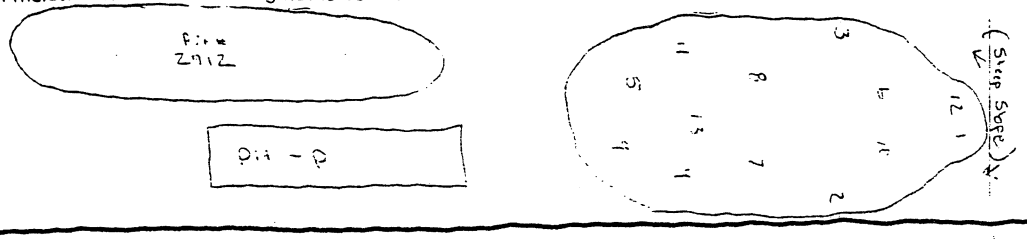
Standard Count

Density Count: 2666 Moisture Count: 622

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
11	↓	113.7	9.5	103.8	112.4	92%
12		112.7	7.9	104.4	112.4	93%
13		112.8	8	104.4	112.4	93%

Compaction Requirements: 90 % ☑ Conformance ☐ Non Conformance

Remarks/Specifications
Optimum moisture is 7.6%. Drawing not to scale.



☑ Distribute Client
☐ Distribute Engineer
☐ Distribute Municipality
☐ Distribute Contractor
☐ Distribute Architect
☐ Distribute Other 1
☐ Distribute Other 2
☐ Distribute Other 3

Reviewed By: Hale, Alan
Tested By: Norgar, Jason NO

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3116

A-A-R Testing Laboratory, Inc. 7126 180th Ave N.E. Park 180 Suite C101, Redmond, WA 98052 Phone 425.881.5812 Fax 425.881.5441

Client:	Wyser Construction	**Project Number**	03-100
Contact:		**Project Name:**	Edmonds Unocal
Address:	17125 Sunset Road	**Address:**	Pine Street
	Bothell, WA 98012	**Permit Number:**	NA
Date:	4/11/03	**Time:**	9:50:00 AM

Material Data

Material Description: Sand with minimal agg
Layer Thickness: Unknown
Source: Rinker
Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 28462
Test Methods: Soil ASTM D2922, ASTM D3017
☑ DirectTransmission ☐ Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

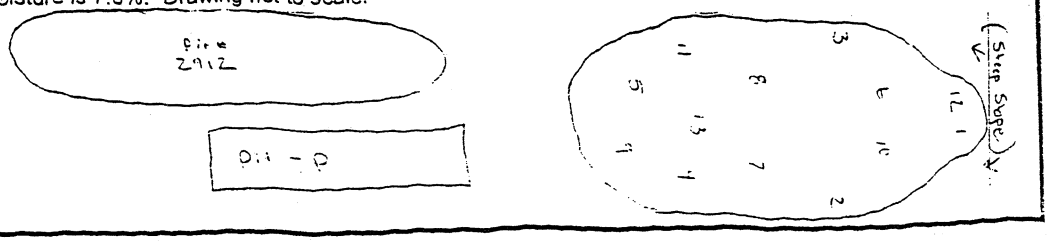
Standard Count

Density Count: 2666 Moisture Count: 622

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
6	3rd Lift	114.9	8.3	106	112.4	94%
7		114.6	8.4	105.7	112.4	94%
8		112.8	7.2	105.2	112.4	94%
9		112.5	8.1	104	112.4	93%
10	4th Lift	110.9	8	102.7	112.4	91%

Compaction Requirements: 90 % ☑ Conformance ☐ Non Conformance

Remarks/Specifications
Optimum moisture is 7.6%. Drawing not to scale.



☑ Distribute Client
☐ Distribute Engineer
☐ Distribute Municipality
☐ Distribute Contractor
☐ Distribute Architect
☐ Distribute Other 1
☐ Distribute Other 2
☐ Distribute Other 3

Reviewed By: Hale, Alan
Tested By: Norgar, Jason NO

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3116

A-A-R Testing Laboratory, Inc. 7126 180th Ave. N.E. Park 180, Suite C101, Redmond, WA 98052 Phone 425.881.5812 Fax 425.881.5441

Client:	Wyser Construction	**Project Number**	**03-100**
Contact:		**Project Name:**	Edmonds Unocal
Address:	17125 Sunset Road	**Address:**	Pine Street
	Bothell, WA 98012	**Permit Number:**	NA
Date:	4/11/03	**Time:**	9:50:00 AM

Material Data

Material Description: Sand with minimal agg
Layer Thickness: Unknown
Source: Rinker
Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 28462
Test Methods: Soil ASTM D2922, ASTM D3017
☑ DirectTransmission ☐ Back Scatter

Laboratory Test Methods

Modified Proctor ASTM D1557

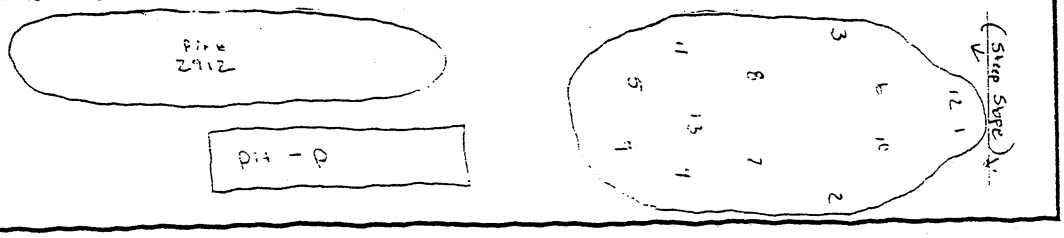
Standard Count

Density Count: 2666 Moisture Count: 622

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	2nd Lift for Water Main Pit, Area U See Sketch	112.8	9.1	103.4	112.4	92%
2		115.1	9.3	105.4	112.4	94%
3		111.8	7.7	103.8	112.4	92%
4		113.3	8	104.9	112.4	93%
5		115	8.7	105.9	112.4	94%

Compaction Requirements: 90 % ☑ Conformance ☐ Non Conformance

Remarks/Specifications
Optimum moisture is 7.6%. Drawing not to scale.



☑ Distribute Client
☐ Distribute Engineer
☐ Distribute Municipality
☐ Distribute Contractor
☐ Distribute Architect
☐ Distribute Other 1
☐ Distribute Other 2
☐ Distribute Other 3

Reviewed By: Hale, Alan
Tested By: Norgar, Jason NO

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3119

A.A.R Testing Laboratory, Inc. 7126 180th Ave. N.E. Park 180, Suite C101, Redmond, WA 98052 Phone 425.881.5812 Fax 425.881.5441

Client:	Wyser Construction	**Project Number**	03-100
Contact:		**Project Name:**	Edmonds Unocal
Address:	17125 Sunset Road	**Address:**	Pine Street
	Bothell, WA 98012	**Permit Number:**	NA
Date:	4/14/03	**Time:**	11:50:00 AM

Material Data

Material Description: Sand with minimal agg
Layer Thickness: Unknown
Source: Rinker
Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 28462
Test Methods: Soil ASTM D2922, ASTM D3017
☑ DirectTransmission ☐ Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

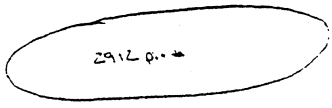
Standard Count

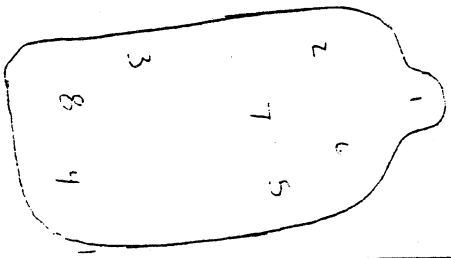
Density Count: 2668 Moisture Count: 598

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
6	6th Lift	115.1	9.6	105	112.4	93%
7		113.7	9.9	103.5	112.4	92%
8		114.2	9.8	104	112.4	93%
9		115	9.9	104.6	112.4	93%

Compaction Requirements: 90 % ☑ Conformance ☐ Non Conformance

Remarks/Specifications
Optimum moisture is 7.6%. Drawing not to scale.





☑ Distribute Client
☐ Distribute Engineer
☐ Distribute Municipality
☐ Distribute Contractor
☐ Distribute Architect
☐ Distribute Other 1
☐ Distribute Other 2
☐ Distribute Other 3

Reviewed By: Hale, Alan
Tested By: Norgar, Jason NO

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3119

A A R Testing Laboratory, Inc. 7126 180th Ave. N.E. Park 180, Suite C101, Redmond, WA 98052 Phone 425.881.5812 Fax 425.881.5441

Client:	Wyser Construction	**Project Number**	03-100
Contact:		**Project Name:**	Edmonds Unocal
Address:	17125 Sunset Road	**Address:**	Pine Street
	Bothell, WA 98012	**Permit Number:**	NA
Date:	4/14/03	**Time:**	11:50:00 AM

Material Data

Material Description: Sand with minimal agg
Layer Thickness: Unknown
Source: Rinker
Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 28462
Test Methods: Soil ASTM D2922, ASTM D3017
☑ DirectTransmission ☐ Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

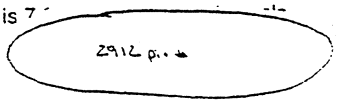
Standard Count

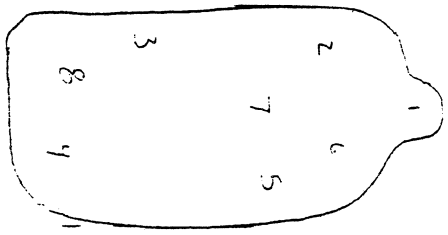
Density Count: 2668 Moisture Count: 598

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	5th Lift for Pit U-Water Main See Sketch	114.7	8.5	105.7	112.4	94%
2		112.9	9	103.6	112.4	92%
3		114.8	8.7	105.6	112.4	94%
4		113.7	8.6	104.7	112.4	93%
5		113.5	8.4	104.7	112.4	93%

Compaction Requirements: 90 % ☑ Conformance ☐ Non Conformance

Remarks/Specifications
Optimum moisture is 7





☑ Distribute Client
☐ Distribute Engineer
☐ Distribute Municipality
☐ Distribute Contractor
☐ Distribute Architect
☐ Distribute Other 1
☐ Distribute Other 2
☐ Distribute Other 3

Reviewed By: Hale, Alan
Tested By: Norgar, Jason NO

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3110

AAR Testing Laboratory, Inc. 7126 180th Ave. N.E. Park 180 Suite C101, Redmond, WA 98052 Phone 425.881.5812 Fax 425.881.5441

Client:	Wyser Construction	Project Number	03-100
Contact:		Project Name:	Edmonds Unocal
Address:	17125 Sunset Road Bothell, WA 98012	Address:	Pine Street
		Permit Number:	NA
Date:	4/15/03	Time:	7:30:00 AM

Material Data

Material Description: Sand with minimal agg
Layer Thickness: Unknown
Source: Rinker
Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 28462
Test Methods: Soil ASTM D2922, ASTM D3017
☑ DirectTransmission ☐ Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

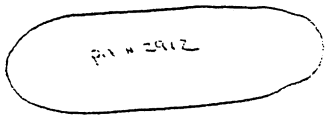
Standard Count

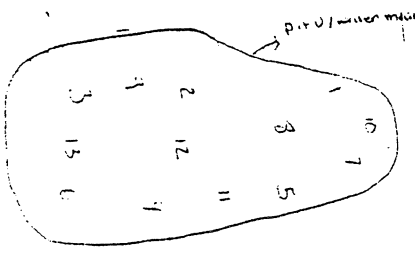
Density Count: 2641 Moisture Count: 630

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
11		114.9	9.6	104.8	112.4	93%
12		114.6	8.3	105.8	112.4	94%
13		113.7	8.9	104.4	112.4	93%

Compaction Requirements: 92 % ☑ Conformance ☐ Non Conformance

Remarks/Specifications
Optimum moisture is 7.6%





☑ Distribute Client
☐ Distribute Engineer
☐ Distribute Municipality
☐ Distribute Contractor
☐ Distribute Architect
☐ Distribute Other 1
☐ Distribute Other 2
☐ Distribute Other 3

Reviewed By: Haie, Alan
Tested By: Norgar, Jason NO

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3110

A.A.R Testing Laboratory, Inc. 7126 180th Ave. N.E. Park 180, Suite C101, Redmond, WA 98052 Phone 425.881.5812 Fax 425.881.5441

Client:	Wyser Construction	**Project Number**	03-100
Contact:		**Project Name:**	Edmonds Unocal
Address:	17125 Sunset Road	**Address:**	Pine Street
	Bothell, WA 98012	**Permit Number:**	NA
Date:	4/15/03	**Time:**	7:30:00 AM

Material Data

Material Description: Sand with minimal agg
Layer Thickness: Unknown
Source: Rinker
Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 28462
Test Methods: Soil ASTM D2922, ASTM D3017
☑ DirectTransmission ☐ Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

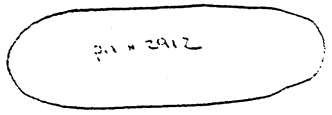
Standard Count

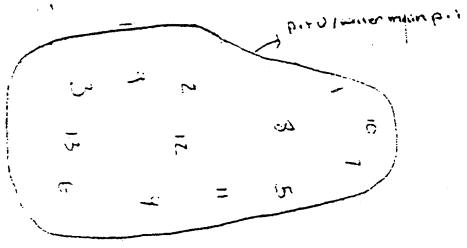
Density Count: 2641 Moisture Count: 630

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
6	8th Lift for Pit U/Water Main See Sketch	112.7	9.5	102.9	112.4	92%
7		113.6	9.4	103.8	112.4	92%
8		114	10.1	103.5	112.4	92%
9		112.5	8.9	103.3	112.4	92%
10	9th Lift for Pit U/Water Main See Sketch	115.2	11.2	103.6	112.4	92%

Compaction Requirements: 92 % ☑ Conformance ☐ Non Conformance

Remarks/Specifications
Optimum moisture is 7.6%





☑ Distribute Client
☐ Distribute Engineer
☐ Distribute Municipality
☐ Distribute Contractor
☐ Distribute Architect
☐ Distribute Other 1
☐ Distribute Other 2
☐ Distribute Other 3

Reviewed By: Hale, Alan
Tested By: Norgar, Jason NC

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3110

AAR Testing Laboratory Inc. 7126 180th Ave. N.E. Park 180 Suite C101 Redmond, WA 98052 Phone 425.881.5812 Fax 425.881.5441

Client:	Wyser Construction	**Project Number**	03-100
Contact:		**Project Name:**	Edmonds Unocal
Address:	17125 Sunset Road	**Address:**	Pine Street
	Bothell, WA 98012	**Permit Number:**	NA
Date:	4/15/03	**Time:**	7:30:00 AM

Material Data

Material Description: Sand with minimal agg
Layer Thickness: Unknown
Source: Rinker
Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 28462
Test Methods: Soil ASTM D2922, ASTM D3017
☑ DirectTransmission ☐ Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

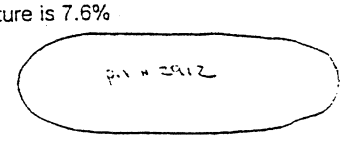
Standard Count

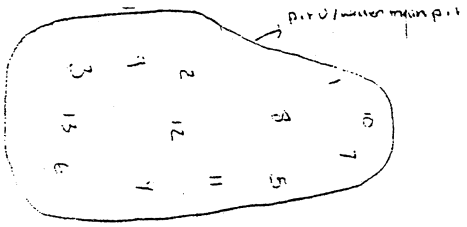
Density Count: 2641 Moisture Count: 630

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	7th Lift for Pit U/Water Main See Sketch	113.6	9	104.2	112.4	93%
2		112.7	9.1	103.3	112.4	92%
3		112.9	9.3	103.3	112.4	92%
4		114.1	10	103.7	112.4	92%
5		113.2	9	103.9	112.4	92%

Compaction Requirements: 92 % ☑ Conformance ☐ Non Conformance

Remarks/Specifications
Optimum moisture is 7.6%





☑ Distribute Client
☐ Distribute Engineer
☐ Distribute Municipality
☐ Distribute Contractor
☐ Distribute Architect
☐ Distribute Other 1
☐ Distribute Other 2
☐ Distribute Other 3

Reviewed By: Hale, Alan
Tested By: Norgar, Jason NO

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3111

A.A.R Testing Laboratory, Inc. 7126 180th Ave. N.E. Park 180 Suite C101, Redmond, WA 98052 Phone 425.881.5812 Fax 425.881.5441

Client:	Wyser Construction	Project Number	03-100
Contact:		Project Name:	Edmonds Unocal
Address:	17125 Sunset Road	Address:	Pine Street
	Bothell, WA 98012	Permit Number:	NA
Date:	4/15/03	Time:	10:30:00 AM

Material Data

Material Description: Sand with minimal agg
Layer Thickness: Unknown
Source: Rinker
Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 28462
Test Methods: Soil ASTM D2922, ASTM D3017
☑ DirectTransmission ☐ Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

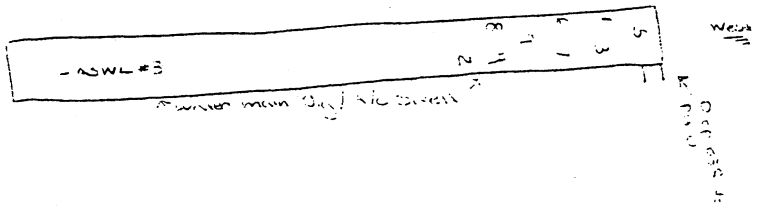
Density Count: 2641 Moisture Count: 630

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
6		115.4	10.1	104.8	112.4	93%
7	4th Lift	114.9	10.2	104.2	112.4	93%
8		115.4	11.1	103.8	112.4	92%
9		115.1	9.9	104.7	112.4	93%

Compaction Requirements: 90 % ☑ Conformance ☐ Non Conformance

Remarks/Specifications

Optimum moisture is 7.6%. Drawing not to scale.



☑ Distribute Client
☐ Distribute Engineer
☐ Distribute Municipality
☐ Distribute Contractor
☐ Distribute Architect
☐ Distribute Other 1
☐ Distribute Other 2
☐ Distribute Other 3

Reviewed By: Hale, Alan
Tested By: Norgar, Jason NO

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3111

AAR Testing Laboratory, Inc. 7126 180th Ave. N.E. Park 180, Suite C101 Redmond, WA 98052 Phone 425.881.5812 Fax 425.881.5441

Client:	Wyser Construction	**Project Number**	**03-100**
Contact:		**Project Name:**	Edmonds Unocal
Address:	17125 Sunset Road	**Address:**	Pine Street
	Bothell, WA 98012	**Permit Number:**	NA
Date:	4/15/03	**Time:**	10:30:00 AM

Material Data

Material Description: Sand with minimal agg
Layer Thickness: Unknown
Source: Rinker
Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 28462
Test Methods: Soil ASTM D2922, ASTM D3017
☑ DirectTransmission ☐ Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

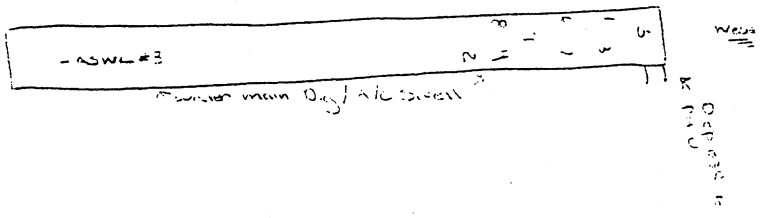
Standard Count

Density Count: 2641 Moisture Count: 630

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	1st Lift over filter fabric See sketch	114.2	11.4	102.5	112.4	91%
2		113.7	9.7	103.6	112.4	92%
3	2nd Lift	113.9	9.2	104.3	112.4	93%
4		114	9.5	104.1	112.4	93%
5	3rd Lift	113.7	9.2	104.1	112.4	93%

Compaction Requirements: 90 % ☑ Conformance ☐ Non Conformance

Remarks/Specifications
Optimum moisture is 7.6%. Drawing not to scale.



☑ Distribute Client
☐ Distribute Engineer
☐ Distribute Municipality
☐ Distribute Contractor
☐ Distribute Architect
☐ Distribute Other 1
☐ Distribute Other 2
☐ Distribute Other 3

Reviewed By: Hale, Alan
Tested By: Norgar, Jason NO

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3192

A A R Testing Laboratory, Inc. 7126 180th Ave. N.E. Park 180, Suite C101, Redmond, WA 98052 Phone 425.881.5812 Fax 425.881.5441

Client:	Wyser Construction	**Project Number**	03-100
Contact:		**Project Name:**	Edmonds Unocal
Address:	17125 Sunset Road	**Address:**	Pine Street
	Bothell, WA 98012	**Permit Number:**	NA
Date:	4/18/03	**Time:**	12:00:00 PM

Material Data

Material Description: Sand with minimal agg
Layer Thickness: Unknown
Source: Rinker
Compaction Method: Hoe Pack

Test Device

Nuclear Gauge: Troxler 3430 21240
Test Methods: Soil ASTM D2922, ASTM D3017
☑ DirectTransmission ☐ Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

Density Count: 2284 Moisture Count: 584

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
11	6th Lift	115.7	10.7	104.5	112.4	93%
12		114.9	11.2	103.3	112.4	92%
13	7th Lift	116.6	11.1	104.9	112.4	93%
14		116.5	12.3	103.7	112.4	92%

Compaction Requirements: 90 % ☑ Conformance ☐ Non Conformance

Remarks/Specifications
Optimum moisture is 7.6%.

☑ Distribute Client
☐ Distribute Engineer
☐ Distribute Municipality
☐ Distribute Contractor
☐ Distribute Architect
☐ Distribute Other 1
☐ Distribute Other 2
☐ Distribute Other 3

Reviewed By: Hale, Alan
Tested By: Randolph, Tara

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3192

AAR Testing Laboratory, Inc. 7126 180th Ave. N.E., Park 180, Suite C101, Redmond, WA 98052 Phone 425.881.5812 Fax 425.881.5441

Client:	Wyser Construction	**Project Number**	03-100
Contact:		**Project Name:**	Edmonds Unocal
Address:	17125 Sunset Road Bothell, WA 98012	**Address:**	Pine Street
		Permit Number:	NA
Date:	4/18/03	**Time:**	12:00:00 PM

Material Data

Material Description: Sand with minimal agg
Layer Thickness: Unknown
Source: Rinker
Compaction Method: Hoe Pack

Test Device

Nuclear Gauge: Troxler 3430 21240
Test Methods: Soil ASTM D2922, ASTM D3017
☑ DirectTransmission ☐ Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

Density Count: 2284 Moisture Count: 584

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
6		112.8	11.8	100.9	112.4	90%
7	4th Lift	114.3	11.5	102.5	112.4	91%
8		113.9	11.3	102.3	112.4	91%
9	5th Lift	116.2	11.4	104.5	112.4	93%
10		116.5	10.9	105	112.4	93%

Compaction Requirements: 90 % ☑ Conformance ☐ Non Conformance

Remarks/Specifications
Optimum moisture is 7.6%.

☑ Distribute Client
☐ Distribute Engineer
☐ Distribute Municipality
☐ Distribute Contractor
☐ Distribute Architect
☐ Distribute Other 1
☐ Distribute Other 2
☐ Distribute Other 3

Reviewed By: Hale, Alan
Tested By: Randolph, Tara

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3192

A.A.R Testing Laboratory, Inc. 7126 180th Ave. N.E., Park 180, Suite C101, Redmond, WA 98052 Phone 425.881.5812 Fax 425.881.5441

Client:	Wyser Construction	**Project Number**	**03-100**
Contact:		**Project Name:**	Edmonds Unocal
Address:	17125 Sunset Road	**Address:**	Pine Street
	Bothell, WA 98012	**Permit Number:**	NA
Date:	4/18/03	**Time:**	12:00:00 PM

Material Data

Material Description: Sand with minimal agg
Layer Thickness: Unknown
Source: Rinker
Compaction Method: Hoe Pack

Test Device

Nuclear Gauge: Troxler 3430 21240
Test Methods: Soil ASTM D2922, ASTM D3017
☑ DirectTransmission ☐ Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

Density Count: 2284 Moisture Count: 584

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	Receiving Storm Catch Basin 1st Lift	114.4	10.9	103.2	112.4	92%
2		115.2	11.1	103.6	112.4	92%
3	2nd Lift	115.9	10.8	104.6	112.4	93%
4		115.2	12.2	102.7	112.4	91%
5	3rd Lift	113.4	11	102.2	112.4	91%

Compaction Requirements: 90 % ☑ Conformance ☐ Non Conformance

Remarks/Specifications
Optimum moisture is 7.6%.

☑ Distribute Client
☐ Distribute Engineer
☐ Distribute Municipality
☐ Distribute Contractor
☐ Distribute Architect
☐ Distribute Other 1
☐ Distribute Other 2
☐ Distribute Other 3

Reviewed By: Hale, Alan
Tested By: Randolph, Tara

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 4954

A.A.R Testing Laboratory, Inc. 7126 180th Ave. N.E., Park 180, Suite C101, Redmond, WA 98052 Phone 425.881.5812 Fax 425.881.5441

Client:	Wyser Construction	**Project Number**	03-100
Contact:		**Project Name:**	Edmonds Unical
Address:	17125 Sunset Road Bothell, WA 98012	**Address:**	Pine Street
		Permit Number:	NA
Date:	1/7/03	**Time:**	9:00:00 AM

Material Data

Material Description: Import pit sand
Layer Thickness: 12" lifts, approximate
Source: Rinker-Everett
Compaction Method: Roller

Test Device

Nuclear Gauge: Troxler 3430 28462
Test Methods: Soil ASTM D2922, ASTM D3017
☑ DirectTransmission ☐ Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

Density Count: 2690 Moisture Count: 643

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	-4' from grade/See Field Report for locations	120.3	12.4	107.1	118	91%
2	-4' from grade	120	12.4	106.8	118	91%
3	-2' from grade	122.1	11.7	109.3	118	93%

Compaction Requirements: 90 % ☑ Conformance ☐ Non Conformance

Remarks/Specifications
Proctor supplied by Rinker
See Field Report #33828 for map
Optimum moisture @ 8.0%

☑ Distribute Client
☐ Distribute Engineer
☐ Distribute Municipality
☐ Distribute Contractor
☐ Distribute Architect
☐ Distribute Other 1
☐ Distribute Other 2
☐ Distribute Other 3

Reviewed By: Alan Hale
Tested By: Norgar, Jason NO

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.